

Release Date ~~10-7-67~~ 7-19-67 *EL*

CONFIDENTIAL

P-W

KERR-MC GEE #3X NAVAJO
SE SE 32-36N-30E Apache County 326

sl

COUNTY Apache AREA 15 mi SW Red Rock LEASE NO. Nav 14-20-0603-8823

WELL NAME Inter. States Petroleum (5-1-94)
Kerr McGee #3X Navajo

LOCATION SE SE SEC 32 TWP 36N RANGE 30E FOOTAGE 330 FEL 980 FSL
ELEV 8017 GR KB SPUD DATE 3-11-67 STATUS Oil TOTAL
COMP. DATE 4-7-67 DEPTH 3600
Recomp. Date 10-8-73 3501 PBD

CONTRACTOR Carmack Drilling Co. Grand Junction

CASING SIZE	DEPTH	CEMENT	LINER SIZE & DEPTH	DRILLED BY ROTARY	
10 3/4 OD	411	325 SKS	NA	<input checked="" type="checkbox"/>	
7	3600	150 SKS			
				DRILLED BY CABLE TOOL	
				PRODUCTIVE RESERVOIR	
				INITIAL PRODUCTION	<u>3427 57</u>

FORMATION TOPS	DEPTHS	SOURCE		REMARKS
		L.L.	E.L.	
			X	
Triassic	0			
Coconino	1095'			
Supai	1840'			
Hermosa	2894'			

ELECTRIC LOGS	PERFORATED INTERVALS	PROD. INTERVALS	SAMPLE LOG
IES, Borehole Comp.	3437-3477	3457-3477	Am Strat
Sonic GR			Sample Descr. Farm Ct
			SAMPLE NO. <u>1395</u>
			CORE ANALYSIS <input checked="" type="checkbox"/>
			DSTs

REMARKS See Recompletion Report 10-8-73
6-8-67 Kerr McGee authorized release of certain info.

APP. TO PLUG
PLUGGING REP.
COMP. REPORT ☒
Recomp. 10-8-73

WATER WELL ACCEPTED BY

BOND CO. Firemen's Ins. Co. BIA BOND BOND NO. 188 98 10-528
DATE 7-10-60
BOND AMT. \$ 25,000 CANCELLED 12/1/67 ORGANIZATION REPORT 7-10-60
FILING RECEIPT 9480 LOC. PLAT X WELL BOOK X PLAT BOOK X
API NO. 02-001-20011 DATE ISSUED 3-15-67 DEDICATION SE/4

PERMIT NUMBER 386

(over)

Release Date 7-19-67

CONFIDENTIAL

[illegible]

CORE RECORD				
NO.	FROM	TO	RECOVERY	REMARKS
1	3678	3762	28'	

DATE STARTED - COMPLETED		WORK PERFORMED	NEW PERFORATIONS

[illegible]

WELL COMPLETION OR RECOMPLETION REPORT AND WELL LOG

DESIGNATE TYPE OF COMPLETION:

New Well ☐ Work-Over ☒ Deepen ☐ Plug Back ☐ Same Reservoir ☒ Different Reservoir ☐ Oil ☒ Gas ☐ Dry ☐

DESCRIPTION OF WELL AND LEASE

Operator **Kerr-McGee Corporation** Address **P. O. Box 250, Amarillo, Texas 79105**

Federal, State or Indian Lease Number or name of lessor if fee lease **14-20-0603-88L3 Navajo** Well Number **3-X** Field & Reservoir **Dineh-bi-Keyah Lower Hermosa**

Location **980' FSL and 330' FEL of** County **Apache**

Sec. TWP-Range or Block & Survey
Section 32, T36N, R30E

Date started **6-4-73** Date total depth reached **--** Date completed, ready to produce **6-11-73** Elevation (DE, RKB, RT or Gr.) **8,017' GR** Elevation of casing hd. flange **--** feet

Total depth **3,600'** P.B.T.D. **3,501'** Single, dual or triple completion? **Single** If this is a dual or triple completion, furnish separate report for each completion.

Producing interval (s) for this completion **3,457'-3,477'** Rotary tools used (Interval) **0-3,600** Cable tools used (Interval) **None**

Was this well directionally drilled? **No** Was directional survey made? **No** Was copy of directional survey filed? **No** Date filed **July 12, 1967**

Type of electrical or other logs run (check logs filed with the commission)
Induction - Electric and Sonic-Gamma Ray

CASING RECORD

Casing (report all strings set in well—conductor, surface, intermediate, producing, etc.)						
Purpose	Size hole drilled	Size casing set	Weight (lb./ft.)	Depth set	Sacks cement	Amt. pulled
Surface	15"	10-3/4"	32.75	411'	325	None
Production	8-3/4"	7"	20	3,583'	150	None

TUBING RECORD

Size	Depth set	Packer set at	Size	Top	Bottom	Sacks cement	Screen (ft.)
3 1/2" in.	3,490 ft.	None ft.	in.	None ft.	ft.		

PERFORATION RECORD

Number per ft.	Size & type	Depth Interval	ACID, SHOT, FRACTURE, CEMENT SQUEEZE RECORD	
			Amt. & kind of material used	Depth Interval
2 HPF	Jets	3,437'-3,477'	77,674 gals. crude & 80,000# 10-20 sand	3,437'-3,477'

INITIAL PRODUCTION

Date of first production **6-19-73** Producing method (indicate if flowing, gas lift or pumping—if pumping, show size & type of pump:) **Pumping 3" x 2" x 16' RWBC Rod Pump**

Date of test	Hrs. tested	Choke size	Oil prod. during test	Gas prod. during test	Water prod. during test	Oil gravity
6-19-73	24	None	320 bbls.	138 MCF	75 bbls.	40 ° API (Corr)
Tubing pressure	Casing pressure	Cal'ated rate of Production per 24 hrs.	Oil	Gas	Water	Gas-oil ratio
--	--		320 bbls.	138 MCF	75 bbls.	432

Disposition of gas (state whether vented, used for fuel or sold):
Vented and used for fuel for generators

CERTIFICATE: I, the undersigned, under the penalty of perjury, state that I am the **District Production Supt.** of the **Kerr-McGee Corporation** (company), and that I am authorized by said company to make this report; and that this report was prepared under my supervision and direction and that the facts stated therein are true, correct and complete to the best of my knowledge.

October 8, 1973
Date

C. J. Breeden
Signature **C. J. Breeden**

RECEIVED

OCT 10 1973

Permit No. **386**

O & G CONS. COMM.

STATE OF ARIZONA
OIL & GAS CONSERVATION COMMISSION

Well Completion or Recompletion Report and Well Log

File Copy

Form No. 4

WELL COMPLETION OR RECOMPLETION REPORT AND WELL LOG									
DESIGNATE TYPE OF COMPLETION:									
New Well <input checked="" type="checkbox"/>	Work-Over <input type="checkbox"/>	Deepen <input type="checkbox"/>	Plug Back <input type="checkbox"/>	Same Reservoir <input type="checkbox"/>	Different Reservoir <input type="checkbox"/>	Oil <input checked="" type="checkbox"/>	Gas <input type="checkbox"/>	Dry <input type="checkbox"/>	
DESCRIPTION OF WELL AND LEASE									
Operator Kerr-McGee Corporation				Address P.O. Box K, Sunray, Texas 79086					
Federal, State or Indian Lease Number or name of lessor if fee lease 14-20-0603-8823 Navajo				Well Number 3X		Field & Reservoir Dineh bi Keyah Hermosa			
Location 330' FEL and 980' FSL				County Apache					
Sec. TWP-Range or Block & Survey Sec 32, T36N, R30E									
Date spudded 3-11-67		Date total depth reached 3-26-67		Date completed, ready to produce 4-7-67		Elevation (D.R., R.K.B., RT or Gr.) UR 8,017 feet		Elevation of casing hd. flange _____ feet	
Total depth 3,600'		P.B.T.D. 3,501		Single, dual or triple completion? Single		If this is a dual or triple completion, furnish separate report for each completion.			
Producing interval (s) for this completion 3,427' - 3,457'				Rotary tools used (interval) All		Cable tools used (interval) None			
Was this well directionally drilled? No		Was directional survey made? No		Was copy of directional survey filed? No		Date filed			
Type of electrical or other logs run (check logs filed with the commission) Induction-Electric and Sonic-Gamma Ray						Date filed			
CASING RECORD									
Casing (report all strings set in well—conductor, surface, intermediate, producing, etc.)									
Purpose	Size hole drilled	Size casing set	Weight (lb./ft.)	Depth set	Sacks cement	Amt. pulled			
Surface	15"	10 3/4"	32.75	411'	325	None			
Production	8 3/4"	7"	20	3,583'	150	None			
TUBING RECORD				LINER RECORD					
Size	Depth set	Packer set at	Size	Top	Bottom	Sacks cement	Screen (ft.)		
3 1/2 in.	2,962 ft.	None ft.	None in.	None ft.	ft.	ft.	ft.		
PERFORATION RECORD				ACID, SHOT, FRACTURE, CEMENT SQUEEZE RECORD					
Number per ft.	Size & type	Depth Interval		Am't. & kind of material used			Depth Interval		
				250 gals acetic acid			3427 - 3457		
5	0.47" Jet	3,427' - 3,457'		1500 gals 3% hydrofluoric			30,000 gals oil & 15,000# sand		
INITIAL PRODUCTION									
Date of first production 4-4-67		Producing method (Indicate if flowing, gas lift or pumping—if pumping, show size & type of pump:) Pumping Reda Pump							
Date of test 4-9-67	Hrs. tested 24	Choke size _____	Oil prod. during test 2865 bbls.	Gas prod. during test 367 MCF	Water prod. during test 0 bbls.	Oil gravity 43.5° API (Corr)			
Tubing pressure _____	Casing pressure _____	Cal'd rate of Production per 24 hrs.	Oil 2865 bbls.	Gas 367 MCF	Water 0 bbls.	Gas-oil ratio 128			
Disposition of gas (state whether vented, used for fuel or sold): Vented									
<p>CERTIFICATE: I, the undersigned, under the penalty of perjury, state that I am the _____ Agent _____ of the _____</p> <p>Kerr-McGee Corporation (company), and that I am authorized by said company to make this report and that this report was prepared under my supervision and direction and that the facts stated therein are true, correct and complete to the best of my knowledge.</p> <p>April 11, 1967 _____ Date Signature</p>									
Permit No. 386				<p>STATE OF ARIZONA OIL & GAS CONSERVATION COMMISSION</p> <p>Well Completion or Recompletion Report and Well Log</p> <p>Form No. 4 File One Copy</p>					

DETAIL OF FORMATIONS PENETRATED

Formation	Top	Bottom	Description*
Triassic	0	1,095'	Shale and sand streaks
Coconino	1,095'	1,840'	Sand, shale, and chert streaks
Supai	1,840'	2,894'	Shale and sand
Hermosa	2,894'	3,600'	Igneous rock 3422-80 (F-105, 100)
			Top of porosity at 3,420'.
			No drill stem tests.
			Cored from 3,427' to 3,482'.
			Complete recovery.

* Show all important zones of porosity, detail of all cores, and all drill-stem tests, including depth interval tested, cushion used, time tool open, flowing and shut-in pressures, and recoveries.

INSTRUCTIONS:

Attach drillers log or other acceptable log of well.

This Well Completion or Recompletion report and well log shall be filed with the State of Arizona Oil & Gas Conservation Commission not later than thirty days after project completion.

Form No. 4

OPERATOR'S CERTIFICATE OF COMPLIANCE AND AUTHORIZATION TO TRANSPORT OIL OR GAS FROM LEASE		
Federal, State or Indian Lease Number, or lessor's name if fee lease <u>14-20-0603-8823</u>	Field <u>Dineh-BI-Keyah</u>	Reservoir <u>Hermosa</u>
Survey or Sec-Twp-Rge <u>Sec 29, 30, 31, 32 T-36N-R30E</u>	County <u>Apache</u>	State <u>AZ</u>
Operator <u>Mountain States Petroleum Corp.</u>		
ADDRESS ALL CORRESPONDENCE CONCERNING THIS FORM TO:		
Street <u>P O Bx 1936</u>	City <u>Roswell,</u>	State <u>New Mexico 88202</u>
Above named operator authorizes (name of transporter)		
Transporter's street address <u>P O Bx 12999</u>	City <u>Scottsdale,</u>	State <u>AZ</u>
Field address <u>P O Bx 256 (Bloomfield Hwy) Farmington, N M 87499</u>		
Oil, condensate, gas well gas, casinghead gas		
To transport	<u>100 % of the</u>	<u>oil</u> from said lease.
OTHER GATHERERS TRANSPORTING FROM THIS LEASE ARE AS FOLLOWS:		
Name of gatherer	% transported	Product transported
Indicate whether or not this certificate is for a new lease. If not a new lease, indicate whether or not it is a change of operator, change of lease name, change of gatherer, or a consolidation or subdivision of leases and give effective date of change.		
Change of Oper.		

The undersigned certifies that the rules and regulations of the State of Arizona Oil & Gas Conservation Commission have been complied with in drilling and producing operations on this lease, except as noted above, and that the above transporter is authorized to transport the above specified percentage of the allowable oil or gas produced from the above described property, and that this authorization will be valid until further notice or until cancelled by the State of Arizona Oil & Gas Conservation Commission.

CERTIFICATE: I, the undersigned, under the penalty of perjury, state that I am the Secretary of the Mountain States Petro. Corp. (company), and that I am authorized by said company to make this report; and that this report was prepared under my supervision and direction and that the facts stated therein are true, correct and complete to the best of my knowledge.

Date Aug. 11, 1995 Signature Ruby Wickersham

Date approved: AUG 16 1995

STATE OF ARIZONA
OIL & GAS CONSERVATION COMMISSION

By: Steven L. Rainey

Permit No. 386

STATE OF ARIZONA
OIL & GAS CONSERVATION COMMISSION
Operator's Certificate of Compliance & Authorization to
Transport Oil or Gas from Lease
File Two Copies

Form No. 8

OPERATOR'S CERTIFICATE OF COMPLIANCE AND AUTHORIZATION
TO TRANSPORT OIL OR GAS FROM LEASE

Federal, State or Indian Lease Number, or lessor's name if fee lease 14-20-0603-8823 Navajo	Field Dineh-Bi-Keyah	Reservoir Hermosa
Survey or Sec-Twp-Rge Several - T 36 N, R 30 E	County Apache	State Arizona
Operator Kerr-McGee Corporation		
ADDRESS ALL CORRESPONDENCE CONCERNING THIS FORM TO:		
Street P. O. Box 250	City Amarillo	State Texas, 79189
Above named operator authorizes (name of transporter) Gary-Williams Energy		
Transporter's street address 370 17th St., Suite 5300	City Denver	State Colorado, 80202
Field address P. O. Box 159, Bloomfield, NM 87413		
Oil, condensate, gas well gas, casinghead gas		
To transport 100 % of the Oil from said lease.		
OTHER GATHERERS TRANSPORTING FROM THIS LEASE ARE AS FOLLOWS:		
Name of gatherer	% transported	Product transported
Indicate whether or not this certificate is for a new lease. If not a new lease, indicate whether or not it is a change of operator, change of lease name, change of gatherer, or a consolidation or subdivision of leases and give effective date of change.		

The undersigned certifies that the rules and regulations of the State of Arizona Oil & Gas Conservation Commission have been complied with in drilling and producing operations on this lease, except as noted above, and that the above transporter is authorized to transport the above specified percentage of the allowable oil or gas produced from the above described property, and that this authorization will be valid until further notice or until cancelled by the State of Arizona Oil & Gas Conservation Commission.

CERTIFICATE: I, the undersigned, under the penalty of perjury, state that I am the Area Manager of the Kerr-McGee Corporation (company), and that I am authorized by said company to make this report; and that this report was prepared under my supervision and direction and that the facts stated therein are true, correct and complete to the best of my knowledge.

8/18/92
Date

H.H. Rice
Signature H.H. Rice

Date approved: 8-21-92

STATE OF ARIZONA
OIL & GAS CONSERVATION COMMISSION

By: Steven L. Rain

Permit No. _____

STATE OF ARIZONA
OIL & GAS CONSERVATION COMMISSION
Operator's Certificate of Compliance & Authorization to
Transport Oil or Gas from Lease
File Two Copies

Form No. 8

GAS-OIL RATIO TEST REPORTS

Filed under Oil-Gas Ratio Tests, Dineh-bi-Keyah Field
in cabinet in office of Enforcement Director

SUNDRY NOTICES AND REPORTS ON WELLS

1. Name of Operator Kerr-McGee Corporation
 2. Oil Well ☒ GAS Well ☐ OTHER ☐ (Specify) _____
 3. Well Name Navajo 3-X
 Location 980' FSL and 330' FEL
 Sec. 32 Twp. 36N Rge. 30E County Apache Arizona.
 4. Federal, State or Indian Lease Number, or lessor's name if fee lease 14-20-0603-8823

5. Field or Pool Name Dineh-bi-Keyeh

6. Check Appropriate Box to Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
TEST WATER SHUT-OFF <input type="checkbox"/>	PULL OR ALTER CASING <input type="checkbox"/>	WATER SHUT-OFF <input type="checkbox"/>	MONTHLY PROGRESS <input type="checkbox"/>
FRACTURE TREAT <input type="checkbox"/>	DIRECTIONAL DRILL <input type="checkbox"/>	FRACTURE TREATMENT <input type="checkbox"/>	REPAIRING WELL <input type="checkbox"/>
SHOOT OR ACIDIZE <input type="checkbox"/>	PERFORATE CASING <input type="checkbox"/>	SHOOTING OR ACIDIZING <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
REPAIR WELL <input type="checkbox"/>	CHANGE PLANS <input type="checkbox"/>		ABANDONMENT <input type="checkbox"/>
(OTHER) <u>Use of vacuum pump.</u>		(OTHER) _____	

(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

7. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)

The bottom hole pressure has declined to the point where the fluid is down to the pump seat in this well. This well has been reperforated and faced without any significant result. Permission is requested to pull 8 inches of vacuum on the casing in an attempt to raise the fluid level, and improve the pump efficiency. There are no off-set operators to this well. There are no off-set operators.

APPROVED

OIL & GAS CONSERVATION COMMISSION
 STATE OF ARIZONA

By W.D. McRae
 Date 9-8-77

RECEIVED

SEP 8 1977

O & G CONS. COMM.

8. I hereby certify that the foregoing is true and correct.

Signed Larry D. McRae Larry D. McRae, District Manager, Date 8-15-77
Engineering

STATE OF ARIZONA
 OIL & GAS CONSERVATION COMMISSION

Sundry Notices and Reports On Wells
 File Two Copies

Form No. 25

Permit No. 305-386

ARIZONA SECONDARY RECOVERY PROGRAM PROPOSED

The Arizona Oil and Gas Conservation Commission will hold a hearing September 19 to consider an application by Kerr-McGee Corp for a secondary recovery program using injection of salt water into the Hermosa formation in Dineh Bi Keyah field, Apache County. The location for the project is in 29 through 33-36n-30e, 5 and 6-35n-30e, and 25 and 36-36n-29e. The field has produced more than 13.7 million bbls of oil, 1.8 billion cu ft of gas and 2.4 million bbls of water. The hearing begins at 10:00 am at the Oil and Gas Conservation Commission office, 8686 North Central Avenue, Suite 106, Phoenix.

SUNDY NOTICES AND REPORTS ON WELLS

1. Name of Operator Kerr-McGee Corporation
 2. OIL WELL ☒ GAS WELL ☐ OTHER ☐ (Specify) _____
 3. Well Name Navajo No. 3X
 Location 330 FEL and 980 FSL
 Sec. 32 Twp. 36N Rge. 30E County Apache Arizona.
 4. Federal, State or Indian Lease Number, or lessor's name if fee lease 14-20-0603-8823

5. Field or Pool Name Dineh-bi-Keyah

6. Check Appropriate Box to Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:			SUBSEQUENT REPORT OF:		
TEST WATER SHUT-OFF	<input type="checkbox"/>	PULL OR ALTER CASING	<input type="checkbox"/>	MONTHLY PROGRESS	<input type="checkbox"/>
FRACTURE TREAT	<input type="checkbox"/>	DIRECTIONAL DRILL	<input type="checkbox"/>	REPAIRING WELL	<input type="checkbox"/>
SHOOT OR ACIDIZE	<input type="checkbox"/>	PERFORATE CASING	<input type="checkbox"/>	ALTERING CASING	<input type="checkbox"/>
REPAIR WELL	<input type="checkbox"/>	CHANGE PLANS	<input type="checkbox"/>	ABANDONMENT	<input type="checkbox"/>
(OTHER)	<input type="checkbox"/>		(OTHER)	<u>Perforate casing</u>	<input checked="" type="checkbox"/>

(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

7. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)

6-4-73 Pulled rods, pump and tubing
 6-5-73 Finished pulling tubing. Reperforated from 3,437'-3,457' and new perforations from 3,457'-3,477' with 2 JHPF. Fractured well with 77,674 gallons of gelled lease crude and 80,000# of 10-20 sand. Injection pressures: Maximum 1,600 PSI, Minimum 1,200 PSI, Average 1,500 PSI, instant shut down vacuum. Average injection rate 89.6 BPM. Ran differential temperature survey.
 6-11-73 Ran Tubing, pump and rods. Started pumping well.
 6-18-73 Recovered all of load from fracture treatment.
 6-19-73 Well pumping at approximate rate of 320 BOPD and 75 BWPD.

RECEIVED
 JUN 21 1973
 O & G CONS. COMM.

RECEIVED
 JUN 21 1973
 O & G CONS. COMM.

8. I hereby certify that the foregoing is true and correct.

Signed E. G. Breen

Title Dist. Prod. Supp. Date June 19, 1973

STATE OF ARIZONA
 OIL & GAS CONSERVATION COMMISSION
 Sundry Notices and Reports On Wells
 File Two Copies
 Form No. 25

Permit No. 386

CONDRIY NOTICES AND REPORTS ON WELL

1. Name of Operator Kerr-McGee Corporation
 2. OIL WELL ☒ GAS WELL ☐ OTHER ☐ (Specify) _____
 3. Well Name Navajo No. 3X
 Location 330' FEL and 980' FSL
 Sec. 32 Twp. 36N Rge. 30E County Apache Arizona.
 4. Federal, State or Indian Lease Number, or lessor's name if fee lease 14-20-0603-8823

5. Field or Pool Name Dineh-bi-Keyah

6. Check Appropriate Box to Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
TEST WATER SHUT-OFF <input type="checkbox"/>	PULL OR ALTER CASING <input type="checkbox"/>	WATER SHUT-OFF <input type="checkbox"/>	MONTHLY PROGRESS <input type="checkbox"/>
FRACTURE TREAT <input checked="" type="checkbox"/>	DIRECTIONAL DRILL <input type="checkbox"/>	FRACTURE TREATMENT <input type="checkbox"/>	REPAIRING WELL <input type="checkbox"/>
SHOOT OR ACIDIZE <input type="checkbox"/>	PERFORATE CASING <input checked="" type="checkbox"/>	SHOOTING OR ACIDIZING <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
REPAIR WELL <input type="checkbox"/>	CHANGE PLANS <input type="checkbox"/>	(OTHER) <input type="checkbox"/>	ABANDONMENT <input type="checkbox"/>
(OTHER) _____		(OTHER) _____	

(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

7. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)

Pull rods, pump, and tubing. Reperforate interval from 3,437' - 3,457' with 2 HPF and perforate additional interval from 3,457' - 3,477' with 2 HPF. Fracture treat well with 80,000 gallons of lease crude and 80,000# of 10-20 sand. Run tubing, pump, and rods. Resume pumping well.

Work to start after approval and when weather permits.

RECEIVED

FEB 05 1973

O & G CONS. COMM.

8. I hereby certify that the foregoing is true and correct.

Signed C. J. Breeden Title Dist. Prod. Supt. Date February 2, 1973
C. J. Breeden

APPROVED

OIL & GAS CONSERVATION COMMISSION

STATE OF ARIZONA

Permit No. 386

By W. E. Allen

Date 2-5-73

STATE OF ARIZONA
 OIL & GAS CONSERVATION COMMISSION
 Sundry Notices and Reports On Wells
 File Two Copies

Form No. 25

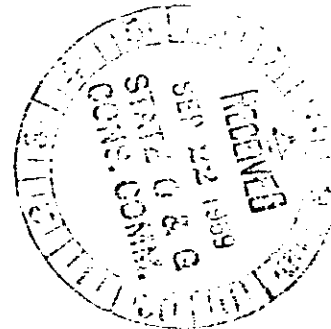


KERR-McGEE

KERR-McGEE BUILDING • OKLAHOMA CITY, OKLAHOMA 73102

September 19, 1969

Mr. John Bannister
Oil and Gas Conservation Commission
Room 202 - 1624 W. Adams
Phoenix, Arizona



Kerr-McGee Navajo No. 11
Interference Test Data

This will transmit the following data for your information:

- 42
1. Twelve-hour shut-in pressure build-up tests on the Navajo No's 1, 2, 3X, 4 and 9 - two copies each well.
 2. Arizona Form 7 with SIP's calculated for each of the above wells - two copies.
 3. No. 11 stabilized pressure survey conducted by Tefteller, Inc. prior to the shut-in of Well No's 1, 2, 3X and 4 - two copies.
 4. Pressure surveys 1 through 4 conducted by Sperry-Sun reflecting the bottom-hole pressure in the Navajo No. 11 during the interference test - one copy each.

The subject test was conducted in August, 1969, utilizing the Navajo No. 11 to monitor reservoir pressure and the No's 1, 2, 3X and 4 to initiate a drawdown signal as offsetting producers. A schedule of events is as follows:

TEST SCHEDULE

August 9, 1969 (Saturday)

- 6:00 AM - Recovered No. 11 load and shut-in well
- 9:30 AM - Rods out of No. 11
- 10:30 AM - Amerada Pressure Bomb on bottom to record 24 hours of stabilized pressure.

August 10, 1969 (Sunday)

- 12:15 PM - Amerada Bomb out of hole
Pressure stable @ 132 psig @ 2845' (+4561) throughout entire 25-3/4 hour period.
- 12:45 PM - Amerada Bomb on bottom
- 1:40 PM - Shut-in Navajo No's 1, 2, 3X and 4.
Conduct 12-hour shut-in pressure build-up tests.
- 5:55 PM - Amerada Bomb out of hole
- 6:35 PM - Sperry-Sun Pressure Gauge on bottom @ 2845' (+4561)

386

386

John Bannister
September 19, 1969
Page 2

August 11, 1969 (Monday)

1:40 AM - Turn on Navajo No. 4
1:40 PM - Turn on Navajo No. 3X

August 12, 1969 (Tuesday)

1:40 AM - Turn on Navajo No. 2
1:40 PM - Turn on Navajo No. 1

August 14, 1969 (Thursday)

6:30 AM - Pulled Sperry-Sun Pressure Gauge - End Run No. 1
8:10 AM - Sperry-Sun Gauge on bottom

August 15, 1969 (Friday)

9:00 PM - Pulled Sperry-Sun Gauge - End Run No. 2
10:30 PM - Sperry-Sun Gauge on bottom

August 17, 1969 (Sunday)

2:50 PM - Pulled Sperry-Sun Gauge - End Run No. 3
4:30 PM - Sperry-Sun Gauge on bottom

August 18, 1969 (Monday)

2:00 PM - Pulled Sperry-Sun Gauge 192-1/3 hours after
official test began (192 hours required) with
the shutting-in of Navajo No's 1, 2, 3X and 4.
Shut-in Navajo No. 9 to conduct 12-hour shut-in
pressure build-up test. Start official potential
test on Navajo No. 11.

August 19, 1969 (Tuesday)

2:00 AM - Turn on Navajo No. 9

Except for minor fluctuations where bottom-hole conditions were interrupted by pulling and re-running the pressure gauge, only one interference point was noted on the Sperry-Sun data. At approximately 5:10 AM on August 12, 1969, an inflection point, although quite subtle, occurred on the Navajo No. 11 bottom-hole pressure plot. This occurrence was 34-1/2 hours after the Sperry-Sun

386


John Bannister
September 19, 1969
Page 3

instrument reached bottom on the first run and 27-1/2 hours after the Navajo No. 4 had been returned to production. Based on radial flow calculations, which may not be applicable to this type of reservoir, this drawdown would be caused by the Navajo No. 4. We could not identify from this data any other well which may have contributed to interference with Well No. 11. It is probable that a critical examination of future individual well performance may provide the best information to evaluate the effects of Well No. 11.

As you will note, shut-in pressure build-up tests are reported on more wells than are required by Order No. 24. Kerr-McGee desired to have this additional information, and it is also reported for the information of the Commission

Sincerely yours,

KERR-McGEE CORPORATION


Bill P. Stauss
Production Division

BPS:md
Enclosures

cc: Humble Oil & Refining Company

386

RESERVOIR PRESSURE REPORT

KERR-MCGEE CORPORATION		Address Kerr-McGee Building, Oklahoma City, Okla.		73102	
Dineh-bi-keyah		County Apache		Date Sept. 12, 1969	
Producing Formation HERMOSA	Oil Gradient .35 psi/ft.	Water Gradient ---	Initial Completion ---	General Survey X	Datum Plane +4500
Special ---			Gas Gravity ---		

Lease	Permit Number	Date Tested	Oil (G)	Shut-In Time Hrs	Shut-In Tubing Pressure	Bomb Test Data			Sonic Instrument Test Data					Pressure At Datum*		
						Test Depth	B.H. Temp.	Observed Pressure	Prod. Test (Bbls per Day)		Liquid Level	Liquid Gradient	Wt. of Liquid Column		Wt. of Gas Column	Casing Pressure
									Oil	Water						
Navajo	377	8-10-69	1	12			Psig								258	
Navajo	379	8-10-69	2	12											191	
Navajo	386	8-10-69	3X	12											211	
Navajo	384	8-10-69	4	12											126	
Navajo	396	8-18-69	9	12											136	

RECEIVED
STATE OF ARIZONA
CONS. COM. 12
SEP 22 1969

Pressures calculated from extrapolations of bottom hole pressure build-up tests in accordance with method set forth by Mr. D. R. Horner (see attached data).

Pressures calculated from extrapolations of bottom hole pressure build-up tests in accordance with method set forth by Mr. D. R. Horner (see attached data).

Designate type of report by "X".

CERTIFICATE: I, the undersigned, under the penalty of perjury, state that I am the.....Reservoir Engr.....of the Kerr-McGee Corporation.....(company), and that I am authorized by said company to make this report; and my report was prepared under my supervision and direction and that the facts stated therein are true, correct and complete to the best of my knowledge.

September 12, 1969

Date

STATE OF ARIZONA
OIL & GAS CONSERVATION COMMISSION

Reservoir Pressure Report

Form No. P-12

File two copies

Authorized by Order No. 4-0-59

Effective April 8, 1959

[Signature]
Signature

283

August 15, 1969

Memo to Kerr-McGee #11 Navajo 8832
T36N, R30E, G & SRM
Sec. 32: NW/4 SE/4
Apache County
Permit #506

Memo From J. Scurlock

On Thursday, August 14, at 6:30 a.m. I accompanied Mr. Bill Stauss and Red Walsh to the Kerr-McGee #11 Well in order to witness the recovery of the Sperry-Sun pressure instrument which had been in the hole for 84 hours; that is, since Sunday at 1:40 p.m. The recovered instrument; which is an extremely sensitive pressure measuring device, showed that at the beginning of the test the pressure reading was 134.26 pounds and that during the course of the first 46 to 48 hours of the test the pressure gradually built up to about 135.54 pounds and that after this initial 46 to 48 hours and for the remainder of the 84-hour testing period the pressure declined to a final reading of 134.37 pounds. This is to say that a field reading indicated a deflection in the curve after a 46 to 48 hour period during which time the #1, 2, 3X, and 4 wells were shut in.

377 379 386 384

At this time it is assumed that this deflection represents the effect from well #4 which was put back on production at 1:40 a.m. Monday morning after a 12-hour shut in. Mr. Stauss had calculated that a deflection point from this well would be seen after 46 hours and so we were very gratified to see that the actual test data bore out his calculation.

The meaning of this series of tests is that we are now sure that the #11 well has good avenues of communication with the rest of the field and this determination primarily was the reason for the tests. The remaining tests will show deflection points on the curve as the effect from wells 3X, 2, and 1 are felt now that they have been placed back on production. This further testing is for the purpose of indicating the direction of the avenues of communication between the #11 well and these other four wells. In other words, we hope to be able to determine the nature of the fracture system within the reservoir and just which other wells may be in close communication with the #11 well.

Page 2

Memo to File #506
August 13, 1969

The Sperry-Sun bomb will be pulled again tonight at 11:30 p.m. and again on Sunday afternoon at about 3:00 or 4:00 p.m. and then again for the final time on Monday afternoon, August 18, at 1:40 p.m. which time will end the 192-hour testing period.

I would presume that as a result of this series of tests that Kerr-McGee will not wish to drill anymore inside locations nor wish to change the spacing pattern in the field because it is obvious that the established spacing is providing adequate drainage.

X-CHRONO
~~At the heart~~

August 11, 1969

Memo to Kerr-McGee #11 Navajo 8832
NW/4 SE/4 Section 32-T36N-R30E
Apache County
Permit #506 X

From J. Scurlock

Telephone conversation at 4:00 p.m. this date with Bill Stauss, Kerr-McGee, concerning the Kerr-McGee #11 Navajo well. Mr. Stauss indicated that the #11 well had recovered all of the load oil (by beam pump) plus about 15 barrels of crude oil. On Sunday at 6:30 p.m. the Amerada pump was placed in the well for 84 hours and recovered from the well at 6:30 a.m. Thursday morning.

377 379 386 384
Bill reports that the #1, 2, 3X, and 4 wells were shut in at 1:40 p.m. Sunday. The #4 well now has been put back on production as of this morning at 1:40 a.m. The #3X well resumed production this afternoon at 1:40 p.m. (after 24 hours shut in). The #2 well will resume production tomorrow at 1:40 p.m. and the #1 well will resume production tomorrow at 1:40 p.m. (after 48 hours shut in).

Mr. Bannister has directed Red Walsh and Geologist Scurlock to be present at 6:30 Thursday morning in order to witness the recovery of the Amerada pump and its replacement with the Sperry-Sun instrument.

The #11 well appears to have fair communications with at least one neighboring well inasmuch as the shut-in pressure has been shown to be low; that is, on the order of 128 to 130 pounds. The well was initially shut in with the Amerada pump on Saturday morning and left shut in for a period of 26 hours.

PRESSURE BUILD-UP TEST

NAVAJO NO. 3X

DATA SHEET

Test Date: 8-10-69
 Producing Rate when Shut-in: 1372 BPD (1185 BOPD)
 Producing Pressure when shut-in: 70 psig @ 3450' (+4552 - Mid Pay)
 Producing Pressure corrected to +4500' Datum: 88 psia
 Cumulative Production to test date: 1,224,500 bbls
 Producing Time (T): 24,792 hours

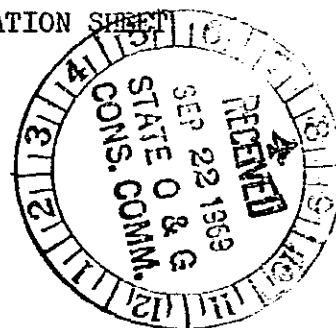
Time	Shut-In Time		Mid-Pay Press (PSIG)	Corrected Press @ +4500' (PSIA)	T
	Min.	Hours			T + T
1:40 PM	0	0.0	70	99	0
1:42 "	2	0.0334	227	256	.0000013
1:45 "	5	0.0833	213	242	.0000034
1:55 "	15	0.2500	201	230	.0000101
2:10 "	30	0.5000	199	228	.0000202
2:40 "	60	1.0000	196	225	.0000403
3:10 "	90	1.5000	191	220	.0000605
3:40 "	120	2.0000	175	204	.0000807
4:10 "	150	2.5000	171	200	.0001008
4:40 "	180	3.0000	162	191	.0001210
5:10 "	210	3.5000	155	183	.0001412
5:40 "	240	4.0000	158	187	.0001613
6:40 "	300	5.0000	158	187	.0002016
7:40 "	360	6.0000	163	192	.0002420
8:40 "	420	7.0000	163	192	.0002823
9:40 "	480	8.0000	163	192	.0003226
11:40 "	600	10.0000	163	192	.0004032
1:40 AM	720	12.0000	163	192	.0004838

PRESSURE BUILD-UP TEST

NAVAJO NO. 3X

Test Date: 8-10-69

CALCULATION SHEET



Dimensionless Pressure Drawdown, $p(t_{De})$

42

$$p(t_{De}) = \frac{2.303 (P_i - P^*)}{M}$$

Where: $p(t_{De})$ = dimensionless pressure drawdown at exterior boundary of drainage system

P_i = initial static pressure in drainage system or reservoir = 612 psia

P^* = pressure at exterior boundary determined by extrapolating straight line slope of build-up plot to infinite shut-in time = 228 psia (plot attached)

M = straight line slope of build-up plot, psia per cycle = 11 (plot attached)

$$p(t_{De}) = \frac{2.303 (612 - 228)}{11} = 80.40$$

Dimensionless Producing Time, t_{De}

The dimensionless producing time is determined to be 21.0 from a plot of $p(t_{De})$ versus t_{De} (refer to Case No. 26 hearing exhibits for example of this plot).

Average Static Pressure, \bar{P}

$$\bar{P} = P_i - 1.737 M t_{De}$$

Where \bar{P} = average static pressure of the drainage system

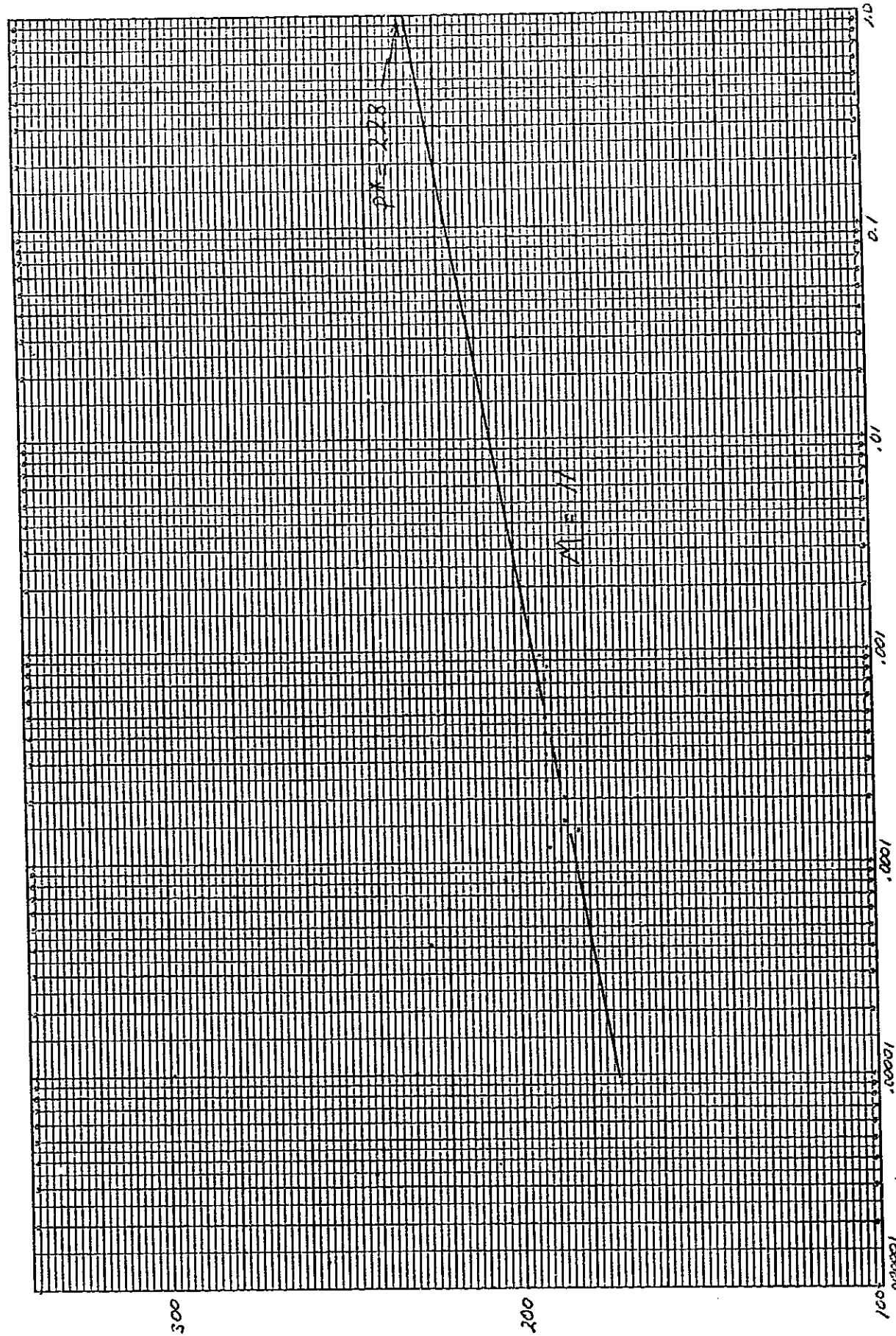
$$\bar{P} = 612 - 1.737 (11) (21) = \underline{\underline{211 \text{ psia}}}$$

NO. 52, 525. 50 DIVISIONS PER INCH (120 DIVISIONS) BY SIX CYCLES RATIO RULING.



CODER BOOK COMPANY, INC., NORWOOD, MASSACHUSETTS.
PRINTED IN U.S.A.

Navajo No. 3X. Pressure Build-Up Plot - August 10, 1969 - +4500' Datum



$\frac{T}{T + T}$

386

RESERVOIR PRESSURE REPORT

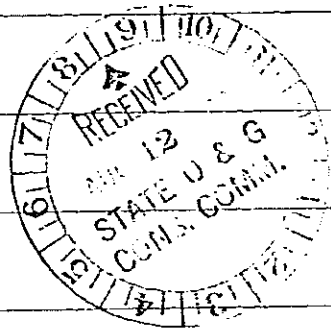
Operator Kerr-McGee Corporation	Address 215 Petroleum Center Building, Farmington, New Mexico 87401		Date 8-9-68
Field Dinebaibi-Koyah	County Apache	Datum Plane +4500'	Gas Gravity
Producing Formation Hermosa	Oil Gradient	Water Gradient	Initial Completion*
			Special*
			General Survey* <input checked="" type="checkbox"/>

Well Name	Permit No.	Well No.	Oil Gas (G) or	Date Tested	Shut-In Tubing Pressure	Bomb Test Data			Sonic Instrument Test Data				Pressure At Datum #	
						Test Depth	B.H. Temp.	Observed Pressure	Prod. Test (Bbls per Day)	Liquid Level	Liquid Gradient	Wt. of Liquid Column		Wt. of Gas Column
Navajo	377	1	0	7-12-68		4703		120 psig						304 psia
Navajo	379	2	0	7-12-68		4573		200						236
Navajo	386	3X	0	7-12-68		4595		192						260
Navajo	389	7	0	7-12-68		4395		114						191
Navajo	396	9	0	7-12-68		4457		88						160
Navajo "B"	445	1X	0	7-12-68		4703		230						474

RECEIVED
MAR 12
STATE U & G
COMM. COMM.

*Pressures taken from extrapolations of bottom hole pressure build-ups in accordance with method set forth by Mr. D. R. Horner (see attached data).

*Pressures taken from extrapolations of bottom hole pressure build-ups in accordance with method set forth by Mr. D. R. Horner (see attached data).



* Designate type of report by "X".

CERTIFICATE: I, the undersigned, under the penalty of perjury, state that I am the Production Supt. of the Kerr-McGee Corporation (company), and that I am authorized by said company to make this report; and this report was prepared under my supervision and direction and that the facts stated herein are true, correct and complete to the best of my knowledge.

August 9, 1968

Date

Signature C D Williams

Form No. 7

Reservoir Pressure Report

File One Copy

STATE OF ARIZONA
OIL & GAS CONSERVATION COMMISSION

386

PRESSURE BUILD-UP TEST

DATA SHEET

NAVAJO NO. 3X

Test Date: July 12, 1968
 Producing Rate when shut-in: 282 BPD
 Producing Pressure when shut-in: 184 psig @ +4595'
 Producing Pressure corrected to 4500' Datum: 227 psia
 Cumulative Production to test date: 800,210 bbls
 Producing Time (T): 68,103 hours

Time	Shut-In Time		Recorded Press. (PSIG) 9	Corrected Press. @ +4500' (PSIA)	$\frac{\Delta T}{T + \Delta T}$
	Min.	Hrs.			
8:00 AM	0	0.0	184	227	0
8:30 "	30	0.5	184	227	.0000073
9:00 "	60	1.0	176	219	.0000147
9:30 "	90	1.5	176	219	.0000220
10:00 "	120	2.0	190	233	.0000294
10:30 "	150	2.5	190	233	.0000367
11:00 "	180	3.0	190	233	.0000440
11:30 "	210	3.5	190	233	.0000514
12:00 Noon	240	4.0	190	233	.0000587
1:00 PM	300	5.0	190	233	.0000734
2:00 "	360	6.0	190	233	.0000881
3:00 "	420	7.0	190	233	.0001028
4:00 "	480	8.0	190	233	.0001175
6:00 "	600	10.0	192	235	.0001468
8:00 "	720	12.0	192	235	.0001762

386



PRESSURE BUILD-UP TEST

CALCULATION SHEET

NAVAJO NO. 3X

Test Date: 7/12/68

Dimensionless Pressure Drawdown, $p(t_{De})$

$$p(t_{De}) = \frac{2.303 (P_i - P^*)}{M}$$

Where: $p(t_{De})$ = dimensionless pressure drawdown at exterior boundary of drainage system.

P_i = initial static pressure in drainage system or reservoir = 612 psia

P^* = pressure at exterior boundary determined by extrapolating straight line slope of build-up plot to infinite shut-in time = 263 psia (plot attached)

M = straight line slope of build-up plot, pounds per square inch per cycle = 7.5 (plot attached)

$$p(t_{De}) = \frac{2.303 (612 - 263)}{7.5} = 107.17$$

Dimensionless Producing Time, t_{De}

The dimensionless producing time is determined to be 27.0 from a plot of $p(t_{De})$ versus t_{De} (refer to Case No. 26 hearing exhibits for example of this plot).

Average Static Pressure, \bar{P}

$$\bar{P} = P_i - 1.737 M t_{De}$$

Where \bar{P} = average static pressure of the drainage system

$$\bar{P} = 612 - 1.737 (7.5) (27.0) = \underline{\underline{260 \text{ psia}}}$$

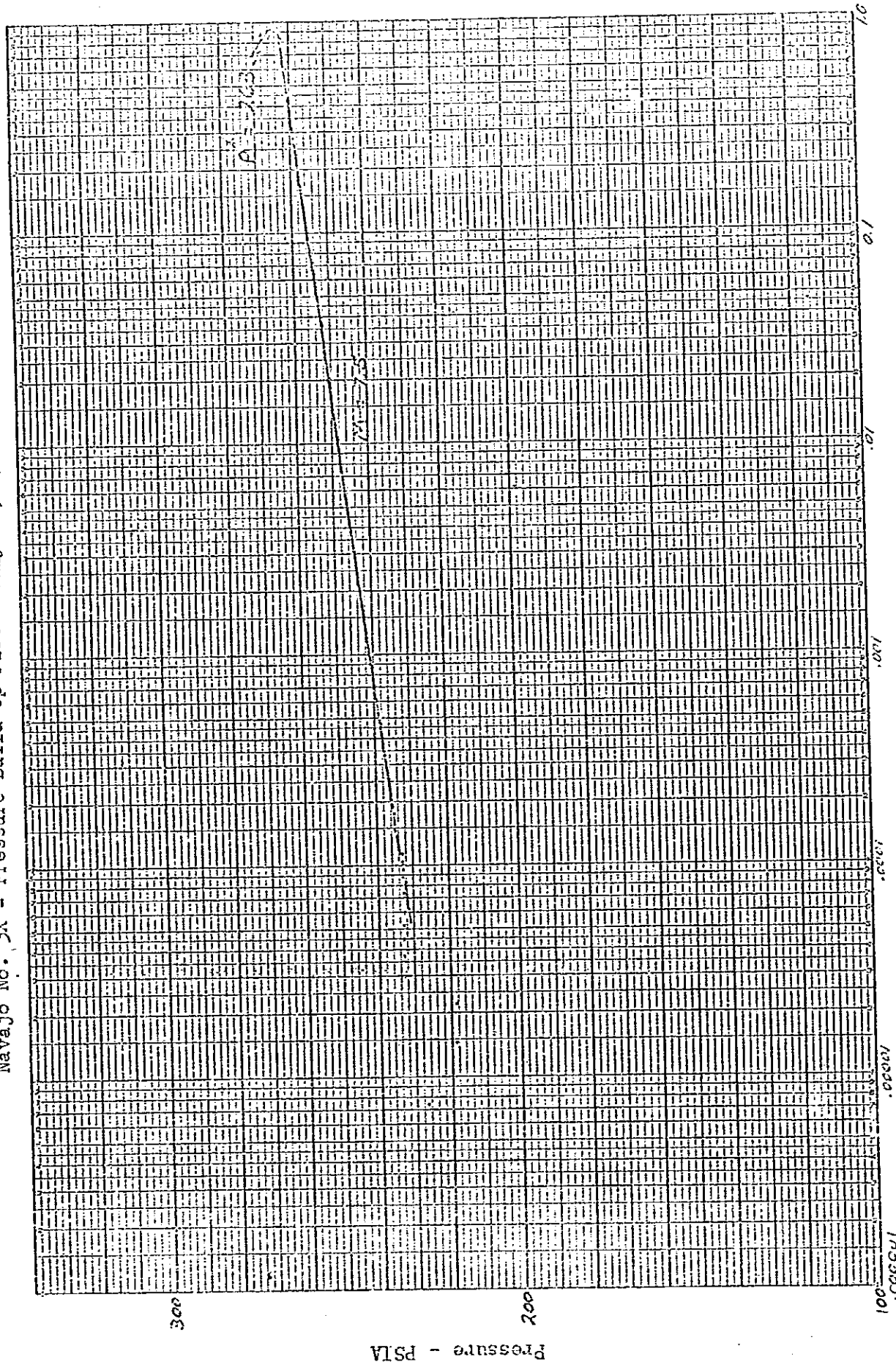


386

CODER BOOK COMPANY, INC., NORWOOD, MASSACHUSETTS.
PRINTED IN U.S.A.

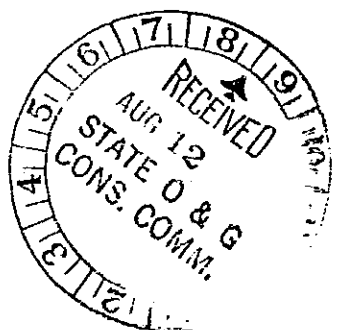
NO. 32,225, 20 DIVISIONS PER INCH (120 DIVISIONS) BY SIX CYCLES RATIO RULING.

Navajo No. 3X - Pressure Build-Up Plot - July 12, 1968 - +4500' Datum



$$\frac{\Delta T}{T + \Delta T}$$

386





KERR-McGEE CORPORATION

KERR-McGEE BUILDING • OKLAHOMA CITY, OKLAHOMA 73102

July 27, 1967

Mr. John Bannister
State of Arizona
Oil & Gas Conservation Commission
Room 202 - 1624 W. Adams
Phoenix, Arizona 85007

Mr. John P. Anderson
United States Geological Survey
Oil & Gas Division
P. O. Drawer 1857
Roswell, New Mexico 88201

Mr. Henry F. Pohlmann
Minerals Supervisor
The Navajo Tribe
412 Petroleum Plaza Building
3535 E. 30th Street
Farmington, New Mexico 87401

Mr. P. T. McGrath
United States Geological Survey
Oil & Gas Division
P. O. Box 959
Farmington, New Mexico

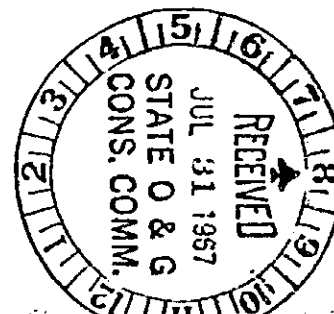
**IGNEOUS SILL RESERVOIR
DINEH BI KEYAH FIELD**

Please find enclosed additional pressure information which we have acquired during the initial productive life of the subject reservoir.

Attachment No. 1 contains all of the shut-in pressure data which we have on wells which are presently producing. This data includes both original and subsequent shut-in pressures taken after each well's completion. Subsurface pressure bombs have been run on six of the nine wells which are presently producing. A data sheet and pressure plot was made for each bomb run by the technician in charge of the survey. This correspondence on four of the six wells (Nos. 2, 4, 7, 9, 14 and 15) on which this survey was conducted is also attached. The data sheets have not been received from the field on Nos. 4 and 15; however, the pressures recorded in these wells have been presented.

Attachment No. 2 contains shut-in pressure buildup data on five producing wells (Nos. 1, 2, (3X), 7 and 9). Please note the rapid pressure buildup characteristics of each well. In an effort to gain as much factual data and knowledge from this reservoir as possible; we are considering gathering additional pressure data.

Utilizing production history and pressure data the indicated producing mechanism at this time is probably solution gas drive.



#386

July 27, 1967
Page -2-

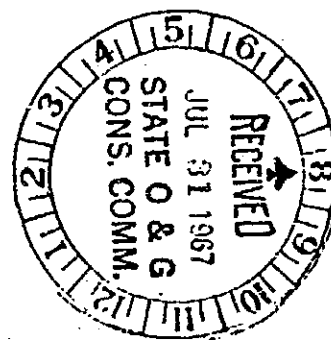
We hope this data will be beneficial to your consideration of
this reservoir.

KERR-McGEE CORPORATION


John I. Fisher
Regional Production Manager

JIF/bes
attachments

cc: C. D. Williams



Attachment No. 1

Shut-in Pressure History Information

Navajo No. 1 - Perfs. 2860-85 (+4713 - +4688); Sensor: 2718 (+4842)

Original (est. from fluid level):2-4-67 650 psig @ 2872 (+4701 - cent. of perfs.)
718 psig @ +4500 datum

Additional:		SI Pressure (Psig)	
Date	Sensor	Perforations	+4500 Datum
4-1-67	462	512	582
4-28-67	462	512	582
7-6-67	386	436	506

Navajo No. 2 - Perfs. 3060-3114 (+4554 - +4500); Sensor: 2590 (+5014)

Original (Sub-surface bomb):3-10-67 645 psig @ 3087 (+4527 - cent. of perfs.)
654 psig @ +4500 datum

Additional:		SI Pressure (Psig)	
Date	Sensor	Perforations	+4500 Datum
4-1-67	440	610	619

Navajo No. 3X - Perfs. 3427-3457 (+4575 - +4545); Sensor: 2967 (+5040)

Original (Sensor Pressure):4-7-67 412 psig @ 2962 (+5040 - sensor location)
601 psig @ +4500 datum

Additional:		SI Pressure (Psig)	
Date	Sensor	Perforations	+4500 Datum
5-10-67	344	512	533
5-24-67	332	500	521
7-6-67	284	452	473

Navajo No. 4 - Open hole 2898-2960 (+4476 - +4414); Sensor: 2788 (+4573)

Original (Sub-surface Bomb)7-17-67 490 psig @ 2950 (+4411)
459 psig @ +4500 datum

Navajo No. 6 - Perfs. 3672-3726 (+4673 - +4619); Beam Pump - No Sensor

Original (Est. from Fluid Level):6-30-67 489 psig @ 3699 (+4633 - cent. of perfs.)
535 psig @ +4500 datum

Attachment No. 2

Shut-in Pressure Build-up Data:

Navajo No. 2 - Test date: 3-19-67

Original SIP on 3-10-67 was 645 psig at 3087 (+4527) or 654 psig at +4500 Datum; Perforations: 3060-3114' (+4554-+4500'); Pressure Sensor at 2590 (+5014); Orig. SIP at Sensor 475 psig. Well SI 3-19-67 after producing at 2875 BOPD rate with 360 psig sensor pump pressure (530 psig at center of perfs.) Pressure build-up as follows:

11:50 AM - SI - Pump Press.	530 psig (cent. of perfs.)
11:55 AM -	600 psig
12:00 Noon -	600 psig
12:05 PM -	600 psig
12:10 PM -	610 psig
12:15 PM -	610 psig
1:15 PM -	610 psig

Navajo No. 1 - Test Period: 7-3 to 6-1967

SIP on 4-28-67 was 462 psig at 2718 (+4842 - sensor location) or 582 psig at +4500 datum; Perforations: 2860-85 (+4713 - +4688) Sensor at 2718 (+4842). Well SI on 7-3-67 after pumping at 550 BOPD rate with 94 psig sensor pressure (214 psig at +4500 datum) Pressure build-up as follows:

<u>Time After SI</u>	<u>Pressure at +4500 Datum</u>
0 SI	214 psig
16 hours	445 psig
40 hours	488 psig
64 hours	506 psig

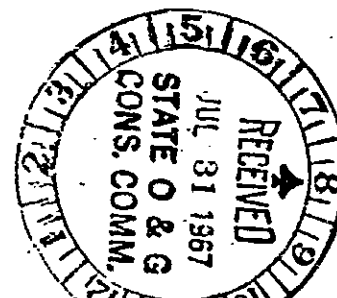
Note: Build-up test indicated that additional pay section should be opened. The well was subsequently recompleted by opening an additional 57 feet of pay and fracture treating. A threefold productivity increase was accomplished.

Navajo BX - Test Period: 7-3 to 6-67

Original SIP on 4-7-67 was 580 psig at 3442 (perfs - +4560) or 601 psig at +4500 datum; Perforations: 3427-57 (+4575 - +4545); Pressure Sensor at 2962 (+5040). Well SI 7-3-67 after pumping at 2540 BOPD rate with 250 psig sensor pressure (439 at +4500 datum). Pressure build-up as follows:

<u>Time After SI</u>	<u>Pressure at +4500 Datum</u>	<u>% Change Fm. Last Press.</u>
0	439 psig	-
16 hours	463 psig	5.2%
40 hours	469 psig	1.3%
64 hours	473 psig	0.8%

Note: 97.9% of the wells 64 hour SIP was achieved after 16 hours.



OPERATOR CERTIFICATE OF COMPLIANCE AND AUTHORIZATION TO TRANSPORT OIL OR GAS FROM LEASE		
Federal, State or Indian Lease Number, or lessor's name if fee lease	Field	Reservoir
14-20-0503-B823	Dineh-bi-Keyah	Lower Hermosa
Survey or Sec-Twp-Rge	County	State
Sec. 29-32-T36N-R30E	Apache	Arizona
Operator Kerr-McGee Corporation		
ADDRESS ALL CORRESPONDENCE CONCERNING THIS FORM TO:		
Street	City	State
215 Petroleum Center Bldg.	Farmington	New Mexico 87401
Above named operator authorizes (name of transporter)		
Kerr-McGee Pipeline Corporation Attention: Mr. A. R. Gockel		
Transporter's street address	City	State
Kerr-McGee Building	Oklahoma City	Oklahoma 73102
Field address P. O. Box 989 - Farmington, New Mexico 87401		
Oil, condensate, gas well gas, casinghead gas		
To transport	% of the	from said lease.
100	oil	
OTHER GATHERERS TRANSPORTING FROM THIS LEASE ARE AS FOLLOWS:		
Name of gatherer	% transported	Product transported
Indicate whether or not this certificate is for a new lease. If not a new lease, indicate whether or not it is a change of operator, change of lease name, change of gatherer, or a consolidation or subdivision of leases and give effective date of change.		
Change of Gatherer & Transporter Effective: 7/14/67		

The undersigned certifies that the rules and regulations of the State of Arizona Oil & Gas Conservation Commission have been complied with in drilling and producing operations on this lease, except as noted above, and that the above transporter is authorized to transport the above specified percentage of the allowable oil or gas produced from the above described property, and that this authorization will be valid until further notice or until cancelled by the State of Arizona Oil & Gas Conservation Commission.

CERTIFICATE: I, the undersigned, under the penalty of perjury, state that I am the Production Superintendent of the Kerr-McGee Corporation (company), and that I am authorized by said company to make this report; and that this report was prepared under my supervision and direction and that the facts stated therein are true, correct and complete to the best of my knowledge.

Date

7/14/67

Signature

P. D. [Signature]

Date approved:

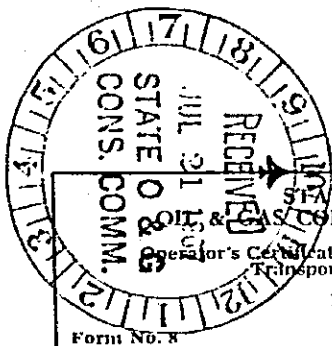
7-21-67

STATE OF ARIZONA
OIL & GAS CONSERVATION COMMISSION

By:

Permit No.

John W. [Signature]



STATE OF ARIZONA
OIL & GAS CONSERVATION COMMISSION
Operator's Certificate of Compliance & Authorization to
Transport Oil or Gas from Lease

File Two Copies

PRODUCERS REPORT OF GAS PRODUCTION

Field	Reservoir	County
DEEN-BL-MYAK	NEEDCOA	ADAMS
Producer	Month	
KERO-ADAMS CORPORATION	MAY 1967	
PRODUCTION		
Federal, State or Indian Lease Number, or lessor's name if fee lease	Wells Reported	Production M.C.F.
	Oil Total No.	Gas Well No.
	Casinghead	Gas Well
	Total	
NAVAJO		
14-20-0603-8823	5	19,954
Total	Less Gas Lift Gas	Net Formation Gas Produced
19,954		19,954
		Wells Produced
		19,954
		Wells Not Produced
DISPOSITION		
Disposition	Volume M.C.F.	
	Casinghead	Gas Well
	Total	
Lease & Field Fuel System	1650	1650
Gas Lift		
Repressuring & Pressure Maintenance		
Transmission Lines		
Processing Plants		
Vented or Flared	18,304	18,304
Other Disposition (Detail)		
Total	19,954	19,954
Remarks:		

Note: All volumes must be corrected to a pressure of 15.025 psia and to a temperature of 60°F. This report shall be used when gas is flared on the lease, used by the producer for his own purposes, or when initial measurement is made by the producer. Gas taken directly by a gas purchaser shall be reported on Form No. 19 or Form 21.

CERTIFICATE: I, the undersigned, under the penalty of perjury, state that I am the PRODUCTION CLERK of the KERR-MCCUE CORPORATION (company), and that I am authorized by said company to make this report; and that this report was prepared under my supervision and direction and that the facts stated therein are true, correct and complete to the best of my knowledge.

2-Ariz. ✓
1-Tribe
1-JIF
1-WRF
1-RF

Signature William Morris

June 21, 1967

Form No. 20

STATE OF ARIZONA
OIL & GAS CONSERVATION COMMISSION
Producers Report of Gas Production
File Two Copies

File Two Copies

(Complete Reverse Side)



KERR-McGEE BUILDING • OKLAHOMA CITY, OKLAHOMA 73102

215 Petroleum Center Building
Farmington, New Mexico
June 8, 1967

State of Arizona
O&G Conservation Commission
Room 202 - 1624 W. Adams
Phoenix, Arizona

Attn: Mr. John Bannister, Exec. Secretary

RE: Dineh-bi-Keyah Field
Apache County, Arizona

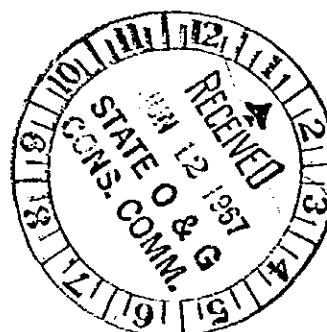
Dear John:

In a telephone conversation with your office today, we were made aware of the fact that the permit to drill for certain wells in the Dineh-bi-Keyah Field would expire in the near future since drilling operations would not commence within the allowed period of 90 days, after date of approval. These wells are:

WELL	PERMIT NO.	DATE OF APPROVAL
Navajo #4	384	3- 9-67
Navajo #6	391	3-30-67
Navajo #12	399	4-24-67
Navajo "C" #1	397	4-24-67

This letter is to confirm my verbal request that the permit time for these four wells be extended an additional 90 days. Due to the changing geological interpretation with the drilling of each well, it is desirable to postpone the drilling of these wells at this time. These locations will probably be drilled at a later date and we would like to keep the permits active. Your consideration of this request will be appreciated.

Confirming my telephone conversation with Mr. Jim Scurlock, Kerr-McGee authorizes the Commission to release certain well information that has been requested held confidential. The Commission may release, if desired, (1) the total depth, perforations, and initial potential for the Navajo #3X, #7, and #9 wells, (2) for





KERR-MCGEE CORPORATION

KERR-MCGEE BUILDING • OKLAHOMA CITY, OKLAHOMA 73102

Mr. John Dannister
June 8, 1967
Page 2

Navajo "B" #1 release perforations only and the fact that we are still testing, (3) for Navajo "B" #2, the total depth, drill stem test results, perforations in the Paradox completion zone (3904'-3907', 3924'-35') and that the well flowed 98 MCF on 1/8" plate with 300 psi on test during completion.

Your assistance and cooperation in these matters is very much appreciated.

Sincerely yours,
KERR-MCGEE CORPORATION

C. D. Williams
C. D. Williams
Prod. Supt.

cc: J.I. Fisher
File
RF

5-10-67

Ran 24 test on 4-26-67
pumped 2938 BO + 242 MCF
82 GOR 43.8° Grav.

6-1-67

Can release TD, IP, & perf.

WELL SITE CHECK

By J. B
Date 4-29-67

Contractor _____ Person(s) Contacted _____

Spud Date _____

Type Rig _____ Rotary Cable Tool Present Operations _____

Samples _____

Pipe _____ Drilling with Air Mud

Water Zones _____ Size Hole _____

Lost Circ. Zones _____ Size Drill Pipe _____

Formation Tops _____ Type Bit _____

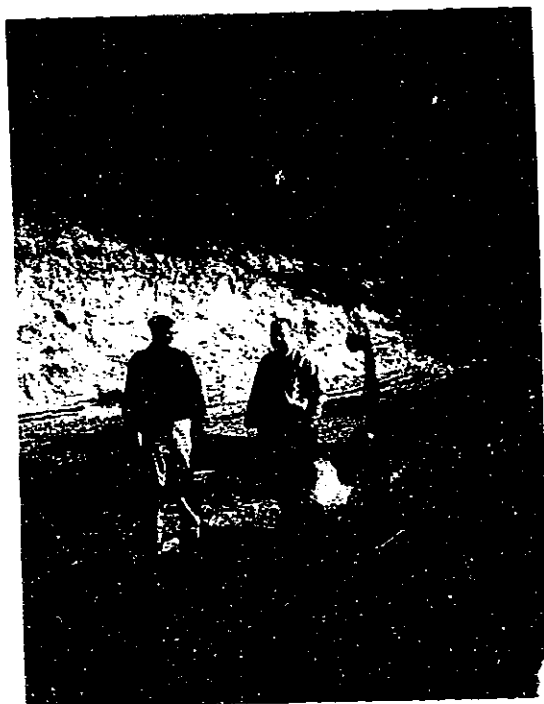
Cores, Logs, DST _____ No. Bit _____ Drilling Date _____

_____ Formation _____

_____ Lithology _____

Grease _____

REMARKS, PHOTO, MAP



Producing into tanks at #1 location
Preparing to trench, then wrap
and lay 4" production pipe
to #1 tanks

Dr. Willard Pye (L) Uof A
John Fisher - Kerr msgel

WELL NAME Kerr-McGee #3X Navajo
SE SE 32-36N-30E
330 FEL 980 FSL

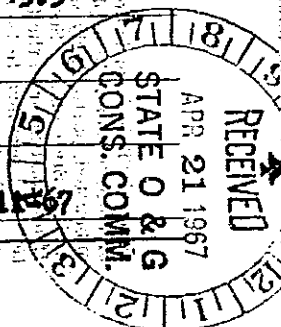
Permit No. 386
Confidential: yes No

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEYSUBMIT IN DUPLICATE
(See other in-
structions on
reverse side)Form approved
Budget Bureau No. 42-R355.5.

WELL COMPLETION OR RECOMPLETION REPORT AND LOG *

1a. TYPE OF WELL:		OIL WELL <input checked="" type="checkbox"/>	GAS WELL <input type="checkbox"/>	DRY <input type="checkbox"/>	Other <input type="checkbox"/>						
b. TYPE OF COMPLETION:		NEW WELL <input type="checkbox"/>	WORK OVER <input type="checkbox"/>	DEEP-EN <input type="checkbox"/>	PLUG BACK <input type="checkbox"/>	DIFF. CESSVR. <input type="checkbox"/>	Other <input type="checkbox"/>				
2. NAME OF OPERATOR Kerr-McGee Corporation											
3. ADDRESS OF OPERATOR P.O. Box K, Sunray, Texas 79086											
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.) At surface 330' FSL and 980' FSL of Section 32, T36N, R30E, Apache County, Arizona. At top prod. interval reported below Same At total depth Same											
14. PERMIT NO.		DATE ISSUED		5. LEASE DESIGNATION AND SERIAL NO.							
State No. 386		3-15-67		14-20-0603-8823							
15. DATE SPUDDED		16. DATE T.D. REACHED		17. DATE COMPL. (Ready to prod.)		18. ELEVATIONS (DF, RKB, RT, GR, ETC.)		19. ELEV. CASINGHEAD			
3-11-67		3-26-67		4-7-67		8,017' GR		-----			
20. TOTAL DEPTH, MD & TVD		21. PLUG, BACK T.D., MD & TVD		22. IF MULTIPLE COMPL., HOW MANY		23. INTERVALS DRILLED BY		24. ROTARY TOOLS			
3,600 MD		3,501 MD		No		All		CABLE TOOLS			
25. PRODUCING INTERVAL(S), OF THIS COMPLETION—TOP, BOTTOM, NAME (MD AND TVD)								26. WAS DIRECTIONAL SURVEY MADE			
3,427' - 3,457' (MD) Hermosa								No			
27. TYPE ELECTRIC AND OTHER LOGS RUN Sonic-Gamma Ray Log and Induction-Electric Log								28. WAS WELL CORED			
								Yes			
29. CASING RECORD (Report all strings set in well)											
CASING SIZE		WEIGHT, LB./FT.		DEPTH SET (MD)		HOLE SIZE		CEMENTING RECORD		AMOUNT PULLED	
10 3/4"		32.75		411'		15"		325 sacks		None	
7"		20		3,583'		8 3/4"		150 sacks		None	
30. LINER RECORD										31. TUBING RECORD	
SIZE		TOP (MD)		BOTTOM (MD)		SACKS CEMENT		SCREEN (MD)		SIZE	
None										3 1/2" OD	
										DEPT. SET (MD)	
										2,962	
										PACKER SET (MD)	
										None	
32. PERFORATION RECORD (Interval, size and number)										33. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.	
Five 0.47" Jets per foot from 3,427' to 3,457'										DEPT. INTERVAL (MD)	
										3,427' - 3,457'	
										3,427' - 3,457'	
										3,427' - 3,457'	
										250 Gallons of Acetic Acid	
										1500 Gallons 3% Hydrofluoric acid	
										30,000 Gallons of oil and 15,000# of sand.	
34. PRODUCTION										35. WELL STATUS (Producing or shut-in)	
DATE FIRST PRODUCTION		PRODUCTION METHOD (Flowing, gas lift, pumping—size and type of pump)				WELL STATUS (Producing or shut-in)					
4-4-67		Pumping Reda Pump				Producing					
DATE OF TEST		HOURS TESTED		CHOKE SIZE		PROD'N. FOR TEST PERIOD		OIL—BBL.		GAS—MCF.	
4-9-67		24		---		---		2,865		367	
FLOW, TUBING PRESS.		CASING PRESSURE		CALCULATED 24-HOUR RATE		OIL—BBL.		GAS—MCF.		WATER—BBL.	
-----		-----		-----		2,865		367		0	
36. DISPOSITION OF GAS (Sold, used for fuel, vented, etc.)										TEST WITNESSED BY	
Vented										L. Vann	
37. LIST OF ATTACHMENTS Induction-Electric log and Sonic - Gamma Ray Log											
38. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records											
SIGNED <u>E. C. Bush, Jr.</u>				TITLE <u>Engineer</u>				DATE <u>4-11-67</u>			

* (See Instructions and Spaces for Additional Data on Reverse Side)



INSTRUCTIONS

General: This form is designed for submitting a complete and correct well completion report and log on all types of lands and leases to either a Federal agency or a State agency, or both, pursuant to applicable Federal and/or State laws and regulations. Any necessary special instructions concerning the use of this form and the number of copies to be submitted, particularly with regard to local, area, or regional procedures and practices, either are shown below or will be issued by, or may be obtained from, the local Federal and/or State office. See instructions on items 22 and 24, and 88, below regarding separate reports for separate completions. Formulas, geologists, sample and core analysis, all types electric, etc., formations and/or State laws and regulations. All attachments should be attached hereto, to the extent required by applicable Federal and/or State laws and regulations. Consult local State and pressure tests, and directional surveys, should be described in accordance with Federal requirements. Consult local State should be listed on this form, see item 35.

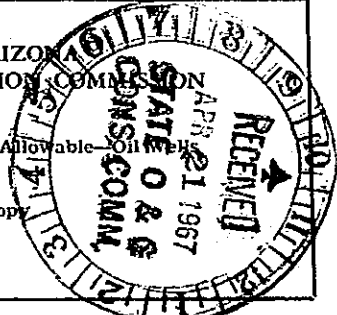
Item 4: If there are no applicable State requirements, locations on Federal or Indian land should be described in accordance with Federal requirements. Consult local State or Federal office for specific instructions.

Item 18: Indicate which elevation is used as reference (where not otherwise shown) for depth measurements given in other spaces on this form and in any attachments. Items 22 and 24: If this well is completed for separate production from more than one interval zone (multiple completion), so state in item 22, and in item 24 show the producing interval, or intervals, top(s), bottom(s), and name(s) (if any) for only the interval reported in item 83. Submit a separate report (page) on this form, adequately identified, for each additional interval to be separately produced, showing the additional data pertinent to such interval.

Item 29: "Stacks Cement": Attached supplemental records for this well should show the details of any multiple stage cementing and the location of the cementing tool.

Item 33: Submit a separate completion report on this form for each interval to be separately produced. (See instruction for items 22 and 24 above.)

37. SUMMARY OF POROUS ZONES:				38. GEOLOGIC MARKERS	
SHOW ALL IMPORTANT ZONES OF POROSITY AND CONTENTS THEREOF; CORED INTERVALS; AND ALL DRILL-STEM TESTS, INCLUDING DEPTH INTERVAL TESTED, CUSHION USED, TIME TO OPEN FLOWING AND SHUT-IN PRESSURES, AND RECOVERIES					
FORMATION	TOP	BOTTOM	DESCRIPTION, CONTENTS, ETC.	NAME	MEAS. DEPTH
Triassic	0	1,095'	Shale and sand streaks		
Coconino	1,095'	1,840'	Sand, shale and chert streaks		
Supai	1,840'	2,894'	Shale and sand		
Hermosa	2,894'	3,600'	Igneous rock Top of porosity at 3,420'. No Drill Stem Tests. Cored from 3,429' to 3,482'. Complete recovery		

POTENTIAL TEST AND REQUEST FOR ALLOWABLE - OIL WELLS				
DESIGNATE TYPE OF COMPLETION:				
New Well <input checked="" type="checkbox"/>	Work-over <input type="checkbox"/>	Deepen <input type="checkbox"/>	Plug Back <input type="checkbox"/>	Same Reservoir <input type="checkbox"/> Different Reservoir <input type="checkbox"/>
Other Reason For Filing:				
Operator Kerr-McGee Corporation				
Address P.O. Box K, Sunray, Texas 79086				
DESCRIPTION OF WELL AND LEASE				
Federal, State or Indian Lease Number, or Lessor's Name if Fee Lease 14-20-0603-8823 Navajo		Well Name 3X		County Apache
Footage Location 330' FEL and 980' FSL				
Sec. Twp. Rge. Sec 32, T36N, R30E				
Date spudded 3-11-67	Date completed, ready to produce 4-7-67	Total depth 3,600'	P.B.T.D. 3501'	
Field and reservoir Dineh bi Keyah Hermosa		Top of pay 3,427	Producing interval 3,427' - 3,457'	
TEST DATA				
Date of first production 4-4-67	Date of test 4-9-67	Length of test 24 hrs.	Producing method (flow pump, gas lift) Pump	Amount of load oil injected if any. None
Number of barrels of oil produced from completion or recompletion date to test date 5,702.54		If well is produced by pumping, give pump size, length of stroke and strokes per minute. Reda Pump		
Tubing pressure	Casing pressure	Choke size		
*Actual production during test:	Oil (bbls) 2,865	Water (bbls) 0	Gas (MCF) 367	
*Production must actually equal or exceed wells daily allowable or test must be for full 24 hours				
Gas-oil ratio 128	MCF/bbl.	Oil gravity 43.5	* A.P.I. corrected	Name of transporter of oil The Permian Corporation
Number of acres attributed to this well 80	Number of producing wells in this reservoir on this lease, including this well 3	Single, dual or triple completion? single	Daily allowable requested (bbls) 2,865	
Plat showing acreage attached—plat should show leases, offset wells, distance from this well to the nearest well on the same lease completed in or drilling to the same reservoir, and the boundaries of drilling and producing, or proration, units attributed to this well and other wells on the same lease completed in or drilling to the same reservoir, the number of acres in each unit and the number of acres in the lease.				
CERTIFICATE: I, the undersigned, under the penalty of perjury, state that I am the <u>Agent</u> of the <u>Kerr-McGee Corporation</u> (company), and that I am authorized by said company to make this report; and that this report was prepared under my supervision and direction and that the facts stated therein are true, correct and complete to the best of my knowledge.				
April 11, 1967 Date		E. C. Berish, Jr. Signature		
Witnessed by: <u>Kerr-McGee Corp.</u> Organization <u>[Signature]</u> Signature April 19, 1967 Date		STATE OF ARIZONA OIL & GAS CONSERVATION COMMISSION Potential Test & Request for Allowable File One Copy Form No. 6		
Permit No. 386				

From the Desk of

JOHN BANNISTER

4-11-67

Telephone - Otto Barton

3X - avg. prod.

2700 to 2800 BOPD

4-8-67 2154 in 17 hrs

9- 2796 in 22 hrs

10 2864 with 367 MCF

Confidential - Surveying
for pipeline

4-7-67 Telcon w/Otto Barton

Re: Kerr-McGee #3X Navajo

4-4-67 Swabbed 271 barrels load oil

4-5-67 Swabbed 490 barrels new oil in 11 hours. Didn't
lower below ~~1,700~~ feet.
1,700

4-6-67 Setting Reeda pump. Should be finished by Saturday
(4-8-67). Pending availability of tank storage, will
probably pump test that same weekend.

Re: Kerr-McGee #B1 Navajo

Perforated 3710-3746, 1 shot per foot. Acetic acid and 3%
solution hydrofluoric acid into formation. Will fract 4-8-67.

Re: Kerr-McGee #7 Navajo

Drilling at close to 3,000 feet. Will probably core sometime
during night. Probably log some time Sunday night (4-9-67).

3

Form 9-331
(May 1963)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUBMIT IN ☒ CLIMATE
(Other instructions on reverse side)

Form approved.
Budget Bureau No. 42-R1424.

5. LEASE DESIGNATION AND SERIAL NO.

14-20-0603-8823

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

Navajo

7. UNIT AGREEMENT NAME

Navajo

8. FARM OR LEASE NAME

Navajo

9. WELL NO.

3A

10. FIELD AND POOL, OR WILDCAT

Wildcat

11. SEC. T., R. & M. OR BLM. AND

Sec 32, T36N, R30E

12. COUNTY OR PARISH 13. STATE

Apache Arizona

14. PERMIT NO.

State Number 386

15. ELEVATIONS (Show whether OF, HT, GR, etc.)

8017' GR

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:

TEST WATER SHUT-OFF

FRACTURE TREAT

SHOOT OR ACIDIZE

REPAIR WELL

(Other)

PULL OR ALTER CASING

MULTIPLE COMPLETE

ABANDON*

CHANGE PLANS

WATER SHUT-OFF

FRACTURE TREATMENT

SHOOTING OR ACIDIZING

(Other)

SUBSEQUENT REPORT OF:

REPAIRING WELL

ALTERING CASING

ABANDONMENT

(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

After acidizing with 1500 gallons of 3% hydrofluoric acid fracture treated well on 4-1-67 with 30,000 gallons of gelled oil and 15,000# of 10-20 sand. Used 5,500 gallon pad and 6,500 gallon flush. Maximum pressure 1700#. After fracturing perforated 3427' to 3457' (previously perforated with 1 jet per foot) with 5 jets per foot on 4-1-67. Perforation size 0.47".

18. I hereby certify that the foregoing is true and correct

SIGNED

E. C. Gresham

TITLE Engineer

DATE 4-1-1967

(This space for Federal or State office use)

APPROVED BY

CONDITIONS OF APPROVAL, IF ANY:

TITLE

*See Instructions on Reverse Side

Form 9-331
(May 1963)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUBMIT IN ()
(Other Instru-
ment or re-
verse side)

Form approved
Budget Bureau No. 42-R1424.

5. LEASE DESIGNATION AND SERIAL NO.

14-20-0603-8823

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

Navajo

7. UNIT AGREEMENT NAME

Navajo

8. FARM OR LEASE NAME

Navajo

9. WELL NO.

3A

10. FIELD AND POOL, OR WILDCAT

Wildcat

11. SEC. T., S., R. OR BLK. AND

Sec 32, T36N, R30E

12. COUNTY OR PARISH

Apache

13. STATE

Arizona

SUNDY NOTICES AND REPORTS ON WELLS
(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir.
Use "APPLICATION FOR PERMIT" for such proposals.)

1. OIL WELL ☒ GAS WELL ☐ OTHER ☐

2. NAME OF OPERATOR

Kerr-McGee Corporation

3. ADDRESS OF OPERATOR

P.O. Box K, Sunray, Texas 79086

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.
See also space 17 below.)

At surface 330' FEL and 980' FSL of Sec 32, T36N, R30E, Apache
County, Arizona

14. PERMIT NO.

State Number 386

15. ELEVATIONS (Show whether DP, RT, GR, etc.)

8017' GR

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:

TEST WATER SHUT-OFF

FRACTURE TREAT

SHOOT OR ACIDIZE

REPAIR WELL

(Other)

PULL OR ALTER CASING

MULTIPLE COMPLETE

ABANDON*

CHANGE PLANS

SUBSEQUENT REPORT OF:

WATER SHUT-OFF

FRACTURE TREATMENT

SHOOTING OR ACIDIZING

(Other)

REPAIRING WELL

ALTERING CASING

ABANDONMENT

(Note: Report results of multiple completion on Well
Completion or Recompletion Report and Log form)

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any
proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones perti-
nent to this work.)

Set production casing at 3582.70 RKB and cemented. Dropped plug and displaced
with 1500 gals acetic acid followed with fresh water. After testing production
casing perforated from 3427' to 3457' with 1 jet per foot on 3-30-67. Perforation
size 0.47". Pumped 250 gal acetic acid into formation and then swabbed back until
dry. After swabbing and cleaning up acidized through tubing with 1500 gallons of
3% hydrofluoric acid and 30 ball sealers.

18. I hereby certify that the foregoing is true and correct

SIGNED

E. C. Smith

TITLE

Engineer

(This space for Federal or State office use)

APPROVED BY

CONDITIONS OF APPROVAL, IF ANY:

TITLE

*See Instructions on Reverse Side

4-3-67 Telcon w/Otto Barton

✓ Re: Kerr-McGee #3X

TD 3600

Perforated: 3427-3457, 1 shot per foot.
1500 gals. acetic acid into formation. Got small show of oil
and of gas. Then acidized with 1500 gals. of 3% hydrofluoric
acid. Gush of oil came back; but settled to 1-2 barrels per
hour. Then fract wit. Put 5500 gals of in in front of the fm
fract--15000 lbs sand and 30000 gals. load oil; pressure 1700 lbs.
Swabbed 4-2-67, 1700 ~~thm~~ barrels in 11 hours. Should get rest
of fract today; test tomorrow.

8027 KB^{est}
3427
+4600

Re: Kerr-McGee #31

Came in way high.

Cored 3678-3762. 28 feet of core looks good; bottom 2 feet are
shale.

Started setting pipe last night, 4-2-67, and finishing this
morning. 7" production to TD of 3850.

Re: Kerr-McGee #7

Spudded 3-29-67 at 8:30 p.m.

Surface pipe (10-3/4") set to 473.73 KB with 500 szx cement.

Drilling now at ¹⁶⁷⁵~~1674~~

Have had a couple of fishing jobs--trouble at bottom of Cocaine.

	4-1-67	4-2-67
#1 Navajo Production	818	836
#2 Navajo Production	3,013	3,000+ (wasn't sure of exact)

Pressures on these wells have not changed; nor has gas/oil ratio.

15
386

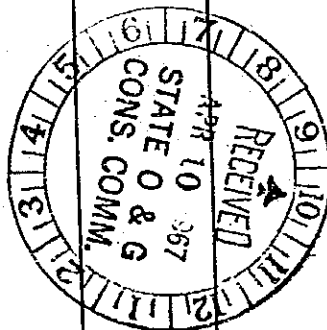
UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

Form approved
Budget Bureau No. 42-B255.5.
Farmington, New Mexico
LAND OFFICE 14-20-0603-8823
LEASE NUMBER
UNIT Navajo No. 3A

LESSEE'S MONTHLY REPORT OF OPERATIONS

State Arizona County Apache Field Wildcat
The following is a correct report of operations and production (including drilling and producing wells) for the month of March, 1967,
Agent's address P.O. Box K, Sunray, Texas 79086 Company Kerr-McGee Corporation
Signed E. C. Bush, Jr.
Phone AC 806, No 948-4118 Agent's title Engineer

SEC. AND 1/4 OF 1/4	TWP.	RANGE	WELL NO.	DATE PRODUCED	BARRELS OF OIL	GRAVITY	CU. FT. OF GAS (In thousands)	GALLONS OF GASOLINE RECOVERED	BARRELS OF WATER (If none, so state)	REMARKS (If drilling, depth; if shut down, cause; date and result of test for gasoline content of gas)
SE SE Sec 32	36N	30E	3A	0	0		0	0	0	
<p>Spudded at 9PM, 3-11-67. Drilled 15" hole to 415'. Set 10 3/4" OD. 32.75 #/ft. H-40. ST&C casing at 411'. cemented with 325 sacks of common cement plus 2% calcium chloride and 1/4# floccle per sack. Circulated out 100 sacks. Plug down at 6 PM, 3-12-67. After waiting on cement 12 hours, tested with 1000# for 30 minutes. Held OK. Drilled 8 3/4" hole to 3600'. Cored from 3427' to 3482'. Set 7" OD. 20#/ft J-55. ST&C Casing at 3582.70' BKH. Cemented with 100 sacks of 1 to 1 portmix, 4% gel and 1/4# floccle per sk followed with 50 sacks common cement. Displaced top wiper plug with 1500 gallons of acetic acid followed with water. Plug down at 6:30 PM, 3-27-67. Released pressure and waited on cement 12 hours. Tested casing to 1500# for 30 minutes. Held OK. Moved off rotary rig and moved in service tig on 3-29-67 to complete. Perforate from 3427' to 3457' with 1 jet per foot on 3-30-67. Perforation size 0.47". Pumped 250 gallons acetic acid into the formation and then swabbed back until dry. After swabbing acidized through tubing with 1500 gallons of 3% by hydrofluoric acid and 30 ball sealers. Swabbing back and preparing to fracture.</p>										



NOTE.—There were no runs or sales of oil; no M cu. ft. of gas sold;

no runs or sales of gasoline during the month. (Write "no" where applicable.)

NOTE.—Report on this form is required for each calendar month, regardless of the status of operations, and must be filed in duplicate with the supervisor by the 6th of the succeeding month, unless otherwise directed by the supervisor.

Form 9-331
(May 1963)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUBMIT IN (APPLICATE)
(Other instructions on reverse side)

Form approved.
Budget Bureau No. 42-21424.

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir.
Use "APPLICATION FOR PERMIT" for such proposals.)

1. OIL WELL <input checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <input type="checkbox"/>	5. LEASE DESIGNATION AND SERIAL NO. 14-20-0603-8823
2. NAME OF OPERATOR Kerr-McGee Corporation	6. INDIAN, ALLOTTEE OR TRIBE NAME Navajo
3. ADDRESS OF OPERATOR P.O. Box K, Sunray, Texas 79086	7. UNIT AGREEMENT NAME
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.* See also space 17 below.) At surface 330° FEL and 980° FSL of Section 32, T36N, R30E, Apache County, Arizona.	8. FARM OR LEASE NAME Navajo
14. PERMIT NO.	9. WELL NO. 34
15. ELEVATIONS (Show whether DF, RT, GR, etc.) 8,017' GR	10. FIELD AND POOL, OR WILDCAT Wildcat
	11. SEC. T., R., M., OR BLM. AND SURVEY OR ANNEAL See 32, T36N, R30E
	12. COUNTY OR PARISH Apache
	13. STATE Arizona

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
TEST WATER SHUT-OFF <input type="checkbox"/>	PULL OR ALTER CASING <input type="checkbox"/>	WATER SHUT-OFF <input type="checkbox"/>	REPAIRING WELL <input type="checkbox"/>
FRACTURE TREAT <input type="checkbox"/>	MULTIPLE COMPLETE <input type="checkbox"/>	FRACTURE TREATMENT <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
SHOOT OR ACIDIZE <input type="checkbox"/>	ABANDON* <input type="checkbox"/>	SHOOTING OR ACIDIZING <input type="checkbox"/>	ABANDONMENT* <input type="checkbox"/>
REPAIR WELL <input type="checkbox"/>	CHANGE PLANS <input type="checkbox"/>	(Other) <input checked="" type="checkbox"/> Test of production casing	
(Other) <input type="checkbox"/>		(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)	

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

After setting and testing surface casing at 411', drilled 8 3/4" hole to 3600'. Set 7" OD, 20#/ft, J-55, St&C casing at 3582.70' RKB. Cemented with 100 sacks of 1 to 1 posmix, 4% gel and 1/4# Floccal/sack followed by 50 sacks common. Plug down at 6:30 PM, 3-27-67. Released pressure and waited on cement 12 hours. Tested casing to 1500' for 30 minutes. Held OK.

18. I hereby certify that the foregoing is true and correct

SIGNED E. C. Bush, Jr.

TITLE Engineer

(This space for Federal or State office use)

APPROVED BY _____
CONDITIONS OF APPROVAL, IF ANY:

TITLE _____

*See Instructions on Reverse Side

18 386

3-28-67 Telcon, Otto Barton, Kerr-McGee

Re: Kerr-McGee #7 Navajo
SE SW 29-36N-30E, Apache County
Permit 389

Will move in rig today. Casing program changed from 9-5/8"
to 10-3/4".

- - - - -

✓ Re: Kerr-McGee #3A Navajo
SE SE 32-36N-30E, Apache County
Permit 386

Cored and set 7" j55 7lb. pipe to 3582.7 KB. Cemented with
150 sax. Hole size at that depth is 8-5/8".

Cored 54 feet--received 28 feet good pay section. Last 2
feet of core is shale. Expect to come in like #1 Navajo.

- - - - -

Re: Kerr-McGee #1 Navajo
SE SW 32-36N-30E, Apache County
Permit 377

Making about 700 BPD with new Reeda pump.

Pump is pulling well faster than hole will fill up; so running
about 45 minutes, shutting down pump for about 30 minutes, and
then starting up again.

Contemplating new fract job.

- - - - -

Re: Kerr-McGee #2 Navajo
SE NW 32-36N-30E, Apache County
Permit 379

Making right at, but has not made, 3000 BPD.

- - - - -

Re: Kerr-McGee #B1 Navajo
SE NW 5-35N-30E, Apache County
Permit 381

Drilling slow. Rig too small for altitude and bigger rig is
being brought in. Small rigs will be released.

386
19

CA-20

CORE LABORATORIES, INC.
Petroleum Reservoir Engineering
DALLAS, TEXAS

Page No. 1

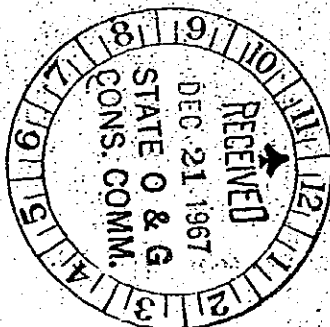
CORE ANALYSIS RESULTS

Company KERR-MCGEE OIL COMPANY Formation HERMOSA File RP-3-2190
Well NAVAJO #3-X Core Type D/C Date Report 3-26-67
Field LUCKA Drilling Fluid LOW SOLIDS JEL Analysts STRICKLIN
County APACHE State ARIZ. Elev. 7992Gr. Location SEC. 32-T36N-R30E

Lithological Abbreviations

SAMPLE NUMBER	DEPTH FEET	PERMEABILITY MILLIDARCY K	POROSITY PER CENT	RESIDUAL SATURATION PER CENT PORE		SAMPLE DESCRIPTION AND REMARKS
				OIL	TOTAL WATER	
1	3434-35	0.25	12.3	13.8	37.4	BIOTITE RICH VOGESITE.
2	3440-41	0.06	10.9	11.9	46.8	BIOTITE RICH VOGESITE.
3	3442-43	0.10	11.6	14.6	36.2	BIOTITE RICH VOGESITE.
4	3444-45	0.33	13.2	12.9	37.9	BIOTITE RICH VOGESITE.
5	3446-47	0.12	12.9	13.2	35.7	BIOTITE RICH VOGESITE.
6	3448-49	0.51	14.6	11.0	30.8	BIOTITE RICH VOGESITE.
7	3450-51	0.28	14.2	11.3	31.7	BIOTITE RICH VOGESITE.
8	3452-53	0.13	13.1	12.2	34.4	BIOTITE RICH VOGESITE.
9	3454-55	0.09	13.1	11.4	41.2	BIOTITE RICH VOGESITE.
10	3456-57	0.06	11.8	12.7	46.2	BIOTITE RICH VOGESITE.

SERVICE #5-A



These analyses, opinions or interpretations are based on observations and materials supplied by the client to whom, and for whose exclusive and confidential use, this report is made. The interpretations or opinions expressed represent the best judgment of Core Laboratories, Inc. (all errors and omissions excepted); but Core Laboratories, Inc. and its officers and employees, assume no responsibility and make no warranty or representation, as to the productivity, proper operations, or profitability of any oil, gas or other mineral well or sand in connection with which such report is used or relied upon.

CA-20

CORE LABORATORIES, INC.
Petroleum Reservoir Engineering
DALLAS, TEXAS

Page No. 1

CORE ANALYSIS RESULTS

Company KERR-MCGEE OIL COMPANY Formation HERMOSA File RP-3-2190
Well NAVAJO #3 Core Type D/C Date Report 3-26-67
Field LUCKA Drilling Fluid LOW SOLIDS JEL Analysts STRICKLIN
County APACHE State ARIZ. Elev. 7992Gr. Location SEC. 32-T36N-R30E

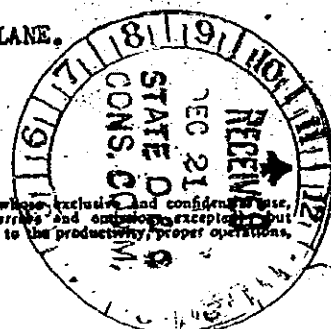
Lithological Abbreviations

SAND-SO SHALE-SH LIME-LM	DOLomite-DOL CHERT-CH GYPSUM-GYP	ANHYDRITE-ANHY CONGLOMERATE-CONG FOSSILIFEROUS-FOSS	SANDY-SDY SHALY-SHY LIMY-LMY	FINE-FN MEDIUM-MED COARSE-COE	CRYSTALLINE-CLN GRAIN-SHN GRANULAR-GRNL	BROWN-BRN GRAY-GRY VUGGY-VUG	FRACTURED-FRAC LAMINATION-LAM STYLOLITIC-STY	SLIGHTLY-SL VERY-V WITH-W
--------------------------------	--	---	------------------------------------	-------------------------------------	---	------------------------------------	--	---------------------------------

SAMPLE NUMBER	DEPTH FEET	PERMEABILITY MILLIDARCYs	POROSITY PER CENT	RESIDUAL SATURATION PER CENT PORE		SAMPLE DESCRIPTION AND REMARKS
				OIL	TOTAL WATER	
		MAX. A 900				
1	3427-28	<0.01	<0.01	9.4	4.1	76.5 THIS ROCK IS A BIOTITE RICH VOGESITE,
2	3428-29	<0.01	<0.01	9.3	1.3	81.5 AND BELONGS TO THE SYENITE IAMPROPHYRE
3	3429-30	<0.01	<0.01	8.2	5.7	75.0 GROUP OF IGNEOUS ROCKS. THIS ENTIRE CORE
4	3430-31	<0.01	<0.01	9.4	10.5	73.6 IS ROCK OF THIS TYPE.
5	3431-32	<0.01	<0.01	9.8	11.4	67.7 *SAMPLES #2&3 ARE BOTH FRACTURED VERTICAL
6	3432-33	<0.01	<0.01	10.0	12.3	72.5 & SAMPLE #5 HAS HORIZ. PARTING PLANES,
7	3433-34	<0.01	<0.01	9.7	17.7	64.3 PROBABLY SANIDINE XLYIZATION.
8	3434-35	<0.01	<0.01	8.3	15.3	63.7 VERT. FRACTURE.
9	3435-36	0.89	<0.01	9.9	8.1	71.8 HAIR LINE V/F.
10	3436-37	<0.01	<0.01	8.5	3.2	76.5 HORIZ. PARTING PLANE.
11	3437-38	<0.01	<0.01	9.0	2.6	81.8 HORIZ. PARTING PLANE.
12	3438-39	<0.01	<0.01	7.4	3.2	82.0 HORIZ. PARTING PLANE.
13	3439-40	<0.01	<0.01	7.6	7.1	77.7 HORIZ. PARTING PLANE.
14	3440-41	<0.01	<0.01	8.1	12.1	70.5 V/F.
15	3441-42	<0.01	<0.01	9.1	12.9	64.3 V/F.
16	3442-43	0.58	<0.01	8.7	14.8	62.3 HAIR LINE V/F.
17	3443-44	<0.01	<0.01	9.2	12.3	58.5 HAIR LINE V/F.
18	3444-45	<0.01	<0.01	8.0	11.9	51.9 HORIZ. PARTING PLANE.
19	3445-46	<0.01	<0.01	8.8	12.6	52.8
20	3446-47	<0.01	<0.01	9.2	20.2	48.1
21	3447-48	<0.01	<0.01	11.2	13.6	48.2
22	3448-49	<0.01	<0.01	12.3	13.6	45.6
23	3449-50	0.70	<0.01	10.8	12.5	42.2 HAIR LINE V/F.
24	3450-51	<0.01	<0.01	12.1	11.4	46.6 HORIZ. PARTING PLANE.
25	3451-52	<0.01	<0.01	10.4	12.3	54.5
26	3452-53	<0.01	<0.01	10.4	11.3	54.3
27	3453-54	<0.01	<0.01	10.6	15.6	53.3
28	3454-55	<0.01	<0.01	11.5	13.6	53.4
29	3455-56	<0.01	<0.01	9.5	10.2	68.3
30	3456-57	<0.01	<0.01	9.2	7.4	69.5 HORIZ. PARTING PLANE.
31	3457-58	<0.01	<0.01	9.7	8.8	73.2
32	3458-59	<0.01	<0.01	9.3	2.8	76.5 HORIZ. PARTING PLANE.
33	3459-60	0.44	<0.01	9.3	2.5	80.5 HAIR LINE V/F, & HORIZ. PARTING PLANE.
34	3460-61	<0.01	<0.01	9.7	2.5	83.4 V/F, & HORIZ. PARTING PLANE.
35	3461-62	<0.01	<0.01	10.2	3.7	81.3
36	3462-63	<0.01	<0.01	9.6	7.6	74.4 HORIZ. PARTING PLANE.
37	3463-64	<0.01	<0.01	10.0	6.6	77.0
38	3464-65	<0.01	<0.01	10.8	5.6	77.6
39	3465-66	<0.01	<0.01	11.2	0.2	83.5

SERVICE #5-B

These analyses, opinions or interpretations are based on observations and materials supplied by the client to whom, and for whose exclusive and confidential use, this report is made. The interpretations or opinions expressed represent the best judgment of Core Laboratories, Inc. (all errors and omissions excepted) but Core Laboratories, Inc. and its officers and employees, assume no responsibility and make no warranty or representations, as to the productivity, proper operations, or profitability of any oil, gas or other mineral well or sand in connection with which such report is used or relied upon.



#386

CA-20

CORE LABORATORIES, INC.
Petroleum Reservoir Engineering
DALLAS, TEXAS

Page No. 2**CORE ANALYSIS RESULTS**

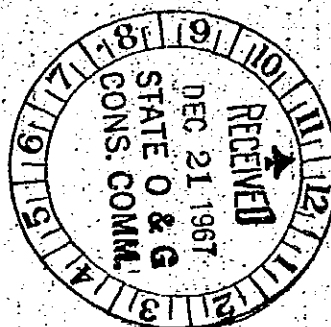
Company KERR-MCGEE OIL COMPANY Formation HERMOSA File RP-3-2190
Well NAVAJO #3-X Core Type D/C Date Report 3-26-67
Field LUCKA Drilling Fluid LOW SOLIDS JEL Analysts STRICKLIN
County APACHE State ARIZ. Elev. 7992Gr. Location SEC. 32-T36N-R30E

Lithological Abbreviations

SAND-SD SHALE-SH LINE-LN	DOLomite-DOL CHERT-CH GYPSUM-GYP	ANhydrite-ANHY CONglomerate-CONG Fossiliferous-FOSS	SANDY-SBY SHALY-SHY LIMY-LMY	FINE-FN MEDIUM-MED COARSE-CE	CRYSTALLINE-CLM GRAIN-GRN GRANULAR-GRNL	BROWN-BRN GRAY-GY VUGGY-VGY	FRACTURED-FRAC LAMINATION-LAM STYLOLITIC-STY	SLIGHTLY-SL/ VERY-V/ WITH-W/
--------------------------------	--	---	------------------------------------	------------------------------------	---	-----------------------------------	--	------------------------------------

SAMPLE NUMBER	DEPTH FEET	PERMEABILITY MILLIDARCY	POROSITY PER CENT	RESIDUAL SATURATION PER CENT PORE		SAMPLE DESCRIPTION AND REMARKS
				OIL	TOTAL WATER	
		MAX	90°			
40	3466-67	0.44	Δ.01	10.2	0.2	82.0 HAIR LINE V/F, HORIZ PARTING PLANE.
41	3467-68	Δ.01	Δ.01	9.6	0.2	78.5
42	3468-69	Δ.01	Δ.01	9.7	2.8	75.0
43	3469-70	Δ.01	Δ.01	7.3	0.3	74.0
44	3470-71	Δ.01	Δ.01	10.0	0.2	75.8
45	3471-72	Δ.01	Δ.01	9.1	0.2	73.5 HORIZ. PARTING PLANE.
46	3472-73	Δ.01	Δ.01	10.1	3.4	68.7 HORIZ. PARTING PLANE.
47	3473-74	Δ.01	Δ.01	10.1	0.2	79.0 HORIZ. PARTING PLANE.
48	3474-75	Δ.01	Δ.01	8.4	0.2	77.5 HORIZ. PARTING PLANE.
49	3475-76	Δ.01	Δ.01	8.8	0.0	85.4 V/F.
50	3476-77	Δ.01	Δ.01	9.5	0.3	75.3 V/F.
51	3477-78	Δ.01	Δ.01	8.1	0.2	76.9
52	3478-79	Δ.01	Δ.01	9.3	0.3	86.5
53	3479-80	Δ.01	Δ.01	7.6	0.0	79.3

SERVICE #5-B



These analyses, opinions or interpretations are based on observations and materials supplied by the client to whom, and for whose exclusive and confidential use, this report is made. The interpretations or opinions expressed represent the best judgment of Core Laboratories, Inc. (all errors and omissions excepted); but Core Laboratories, Inc. and its officers and employees, assume no responsibility and make no warranty or representations, as to the productivity, proper operations, or profitability of any oil, gas or other mineral well or sand in connection with which such report is used or relied upon.

3-24-67

Telcon w/Otto Barton

Coring #3A now. Should have in this weekend

WELL SITE CHECK

By _____
Date _____

Contractor _____ Person(s) Contacted _____

Spud Date _____

Type Rig _____ Rotary
Cable Tool Present Operations _____

Samples _____

Pipe _____ Drilling with Air
Mud

Water Zones _____ Size Hole _____

Lost Circ. Zones _____ Size Drill Pipe _____

Formation Tops _____ Type Bit _____

Cores, Logs, DST _____ No. Bit _____ Drilling
Date _____

Formation _____

Crews _____ Lithology _____

REMARKS, PHOTO, MAP

3-21-67 Otto Barton phoned - dlog at 2983 pay zone expected at
3400'-3500'.
will probably move next to #748 (locations?)

WELL NAME 21 Kerr McGee 3A NavajoPermit No. 386
Confidential: yes NO

Form 9-331
(May 1963)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUBMIT IN TRIPLICATE
(Other instructions on reverse side)

Form approved.
Budget Bureau No. 42-R1424.

5. LEASE DESIGNATION AND SERIAL NO.

14-20-0603-5823

6. IF INDIAN ALLOTTEE OR TRIBE NAME

Navajo

7. UNIT AGREEMENT NAME

Navajo

8. FARM OR LEASE NAME

Navajo

9. WELL NO.

14

10. FIELD AND POOL OR WILBOAT

Wildcat

11. SECTION, T. & M., OR BLM. AND

22-36-130

12. COUNTY OR PARISH

Apache

13. STATE

Arizona

1. OIL WELL ☒ GAS WELL ☐ OTHER ☐

2. NAME OF OPERATOR

Kerr-McGee Corporation

3. ADDRESS OF OPERATOR

P.O. Box 1, Huron, Texas 79066

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements. See also space 17 below.)
At surface

330' FEL and 980' FEL of Section 32, T36N, R30E, Apache County, Arizona

14. PERMIT NO.

15. ELEVATIONS (Show whether DP, RT, GR, etc.)

8,017 GR

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:

TEST WATER SHUT-OFF

FRACTURE TREAT

SHOOT OR ACIDIZE

REPAIR WELL

(Other)

PULL OR ALTER CASING

MULTIPLE COMPLETE

ABANDON*

CHANGE PLANS

WATER SHUT-OFF

FRACTURE TREATMENT

SHOOTING OR ACIDIZING

(Other) Test of surface casing

(Note: Report results of multiple completion on well Completion or Recompletion Report and Log Form H)

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)

Spudded at 9 PM, 3-11-67. Drilled 15" hole to 415'. Set 10 3/4" OD, 22-752/8, 14-40 ST&G casing at 411'. Cemented with 325 sacks of cement plus 25 Calcium Chloride and 1/4# floccs per sack. Circulated out 100 sacks. Plug down at 6 PM, 3-12-67. After waiting on cement 12 hours, tested casing with 1,000# for 30 minutes.

18. I hereby certify that the foregoing is true and correct

SIGNED

E. J. Bruden

TITLE

Engineer

(This space for Federal or State office use)

APPROVED BY

TITLE

CONDITIONS OF APPROVAL, IF ANY:

*See Instructions on Reverse Side

384

Form 9-331 C
(May 1963)

SUBMIT IN ☒ APPLICATION
(Other instructions on reverse side)

Form approved.
Budget Bureau No. 42-R1425.

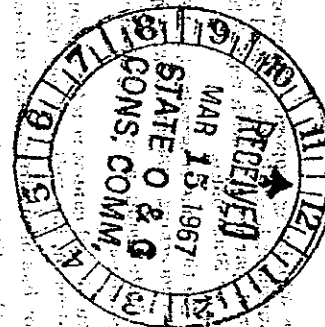
UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. TYPE OF WORK DRILL <input checked="" type="checkbox"/> DEEPEN <input type="checkbox"/> PLUG BACK <input type="checkbox"/>		5. LEASE DESIGNATION AND SERIAL NO. 14-20-0603-8823	
b. TYPE OF WELL OIL WELL <input checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <input type="checkbox"/>		6. IF INDIAN, ALLOTTEE OR TRIBE NAME Navajo	
2. NAME OF OPERATOR Kerr-McGee Corporation		7. UNIT AGREEMENT NAME Navajo	
3. ADDRESS OF OPERATOR P.O. Box K, Surrency, Texas 79086		8. FARM OR LEASE NAME Navajo	
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.) At surface 330' FRL and 980' FRL of Section 32, T36N, R30E, Apache County, Arizona		9. WELL NO. 34	
At proposed prod. zone Same		10. FIELD AND POOL, OR WILDCAT Wildcat	
14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE* 15 miles SW of Red Rock, Arizona		11. SEC., T., R., M., OR S.E. AND SURVEY OR AREA 32-T36N-R30E	
10. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drilg. unit line, if any) 330'		12. COUNTY OR PARISH Apache	
13. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT. 2,965'		13. STATE Arizona	
16. NO. OF ACRES IN LEASE 2.533		17. NO. OF ACRES ASSIGNED TO THIS WELL 80	
19. PROPOSED DEPTH 3,700'		20. ROTARY OR CABLE TOOLS Rotary	
21. ELEVATIONS (Show whether DF, RT, GR, etc.) 8,017' GR		22. APPROX. DATE WORK WILL START* 3-11-67	
23. PROPOSED CASING AND CEMENTING PROGRAM			
SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH
15"	10 3/4"	32.75	400
8 3/4"	7"	20	3,700
QUANTITY OF CEMENT			375 sacks
			Sufficient to cover all potential productive zones.

Blow out Preventers: 400' - 3,700'

1. Kill and choke manifold
2. 10" series 600 QRC or equivalent with pipe rams.
3. 10" series 600 QRC or equivalent with blind rams.



IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen or plug back, give data on present productive zone and proposed new productive zone. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout preventer program, if any.

24. SIGNED E. J. Breiden TITLE Engineer DATE 3-13-67
(This space for Federal or State office use)

PERMIT NO. _____ APPROVAL DATE _____

APPROVED BY _____ TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY:

*See Instructions On Reverse Side

386

23

APPLICATION FOR PERMIT TO DRILL, DEEPEN, PLUG BACK, OR RE-ENTER			
APPLICATION TO DRILL <input checked="" type="checkbox"/> DEEPEN <input type="checkbox"/> PLUG BACK <input type="checkbox"/> RE-ENTER OLD WELL <input type="checkbox"/>			
NAME OF COMPANY OR OPERATOR Kerr-McGee Corporation		DATE 3-11-1967	
P.O. Box K		Sunray, Texas 79086	
DESCRIPTION OF WELL AND LEASE			
Federal, State or Indian Lease Number or name of lessor, if fee lease 14-20-0603-8823 Navajo		Well number 3A Elevation (ground) 8,017' GL	
Well location and acreage dedicated to the well (give footage from section lines) Section—township—range or block & survey 80 acres 330' FEL & 980' FS Section 32, T36N, R30E			
Field & reservoir (if wildcat, so state) Wildcat		County Apache	
Distance, in miles, and direction from nearest town or post office 15 miles SW of Red Rock, Arizona			
Nearest distance from proposed location to property or lease line: 330 feet		Distance from proposed location to nearest drilling, completed or applied—for well on the same lease: 2,965 feet	
Proposed depth: 2,533 3,700'		Rotary or cable tools Rotary Approx. date work will start 3 - 11 - 67	
Number of acres in lease: 2,533		Number of wells on lease, including this well, completed in or drilling to this reservoir: 3	
If lease, purchased with one or more wells drilled, from whom purchased: Name Address			
Status and amount of bond Blanket Bond		Organization Report On file Or attached on file Filing Fee of \$25.00 Attached yes	
Remarks: (If this is an application to deepen or plug back, briefly describe work to be done, giving present producing zone and expected new producing zone)			
*Fill in Proposed Casing Program on reverse side			
CERTIFICATE: I, the undersigned, under the penalty of perjury, state that I am the Agent of the Kerr-McGee Corporation (company), and that I am authorized by said company to make this report; and that this report was prepared under my supervision and direction and that the facts stated therein are true, correct and complete to the best of my knowledge.			
Verbal approval to spud was obtained by Otto Barton from Mr. John Bannister on 3-10-67. <div style="float: right; text-align: right;"> C. J. Breeden Signature March 11, 1967 Date </div>			
Permit Number: 388 386 Approval Date: 3-15-67 Approved By: John Bannister		STATE OF ARIZONA OIL & GAS CONSERVATION COMMISSION Application to Drill, Deepen or Plug Back and Plat File Two Copies Form No. 3	
Notice: Before signing in this form be sure that you have given all information requested. Much unnecessary correspondence will thus be avoided. See Instruction on Reverse Side of Form			

1. Operator shall outline the dedicated acreage for both oil and gas wells on the plat.
2. A registered professional engineer or land surveyor registered in the State of Arizona or approved by the Commission shall show on the plat the location of the well and certify this information in the space provided.
3. All distances shown on the plat must be from the outer boundaries of the Section.
4. Is the Operator the only owner in the dedicated acreage outlined on the plat below? YES ☒ NO ☐
5. If the answer to question four is "no," have the interests of all the owners been consolidated by communitization agreement or otherwise? YES ☐ NO ☐ If answer is "yes," Type of Consolidation _____
6. If the answer to question four is "no," list all the owners and their respective interests below:

Owner - Kerr-McGee Corporation	Land Description Section 32, T36N, R30E, Apache County
<div style="display: flex; justify-content: space-between;"> <div style="width: 60%;"> <p style="text-align: center;">CERTIFICATION</p> <p>I hereby certify that the information above is true and complete to the best of my knowledge and belief.</p> <p>Name <u>E. J. Brecken</u></p> <p>Position <u>Engineer</u></p> <p>Company <u>Kerr-McGee Corporation</u></p> <p>Date <u>March 11, 1967</u></p> </div> <div style="width: 35%;"> <p>I hereby certify that the well location shown on the plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my knowledge and belief.</p> <p>Date Surveyed _____</p> <p>Registered Professional Engineer and/or Land Surveyor _____</p> <p>Certificate No. _____</p> </div> </div>	

PROPOSED CASING PROGRAM

Size of Casing	Weight	Grade & Type	Top	Bottom	Cementing Depths	Sacks Cement
10 3/4"	32.5	J-55	0	400	0 - 400	Sufficient to circulate
7"	20	J-55	0	3,700	Sufficient to cover all potentially productive zones.	



PERMIT TO DRILL

This constitutes the permission and authority from the

OIL AND GAS CONSERVATION COMMISSION,
STATE OF ARIZONA,

To: KERR-MC GEE CORPORATION
(OPERATOR)

to drill a well to be known as

Kerr McGee #3X Navajo
(WELL NAME)

located 330' FEL and 980' FSL

Section 32 Township 36N Range 30E, Apache County, Arizona.

The E/2 SW/4 of said
Section, Township and Range is dedicated to this well.

Said well is to be drilled substantially as outlined in the attached Application and must be drilled in full compliance with all applicable laws, statutes, rules and regulations of the State of Arizona.

Issued this 15th day of March, 1967.

OIL AND GAS CONSERVATION COMMISSION

By John Bannister
EXECUTIVE SECRETARY

PRIOR TO BEING ALLOWED TO PRODUCE THIS WELL
YOU MUST BE IN FULL COMPLIANCE WITH RULE
105, SECTION A THRU G (S.C.C.G.), WITH RESPECT
TO THE PRODUCT TO BE PRODUCED.

PERMIT No. 386

RECEIPT NO. 9480

State of Arizona
Oil & Gas Conservation Commission
Permit to Drill

FORM NO. 27

API No. 02-001-20011

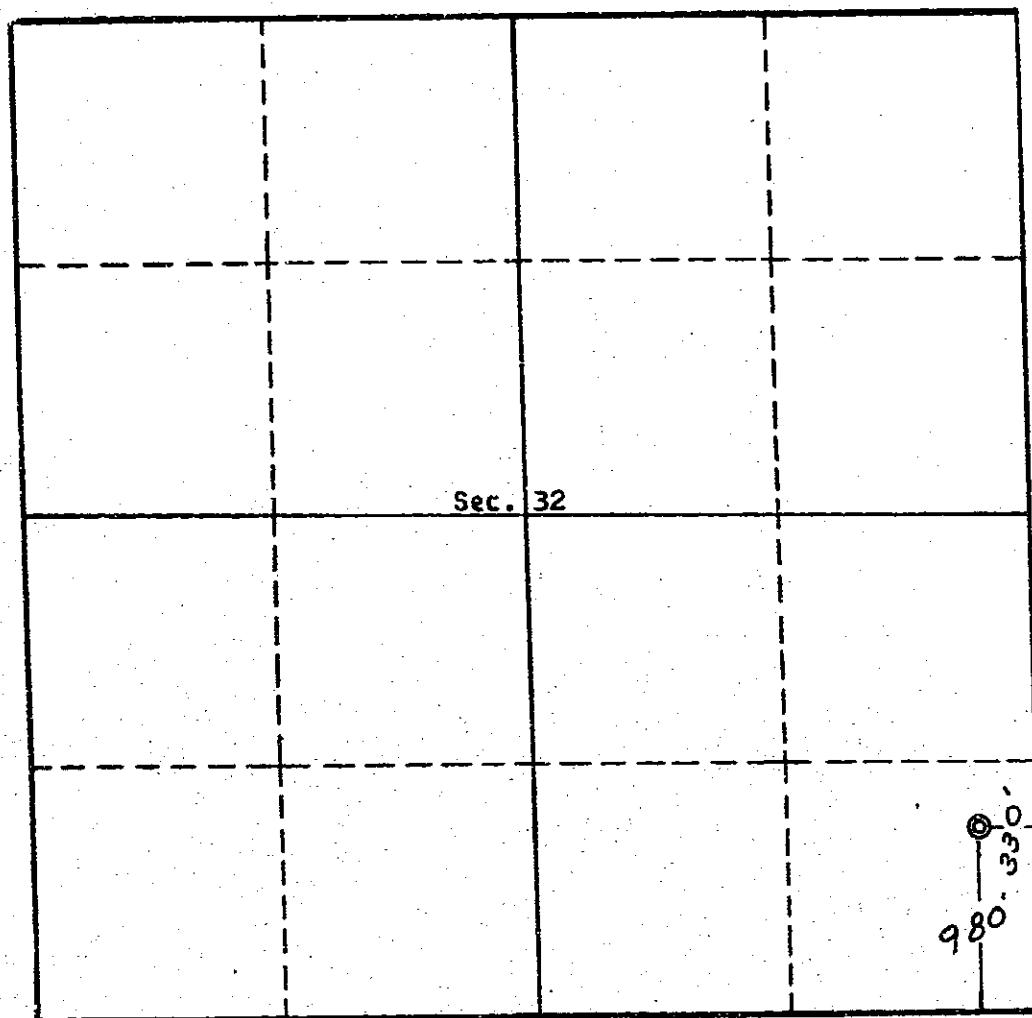
Company KERR-McGEE OIL INDUSTRIES, INC.

Well Name & No. _____

Location 980 feet from the South line and 330 feet from the East line.

Sec. 32, T. 36 N., R. 30 E., G. & S. R. M., County Apache, Arizona

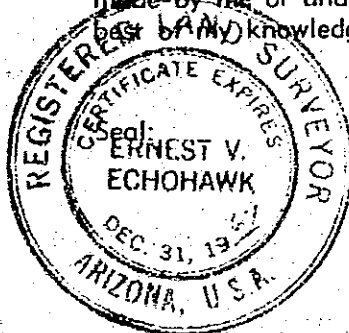
Ground Elevation 7992



Scale, 1 inch = 1,000 feet

Surveyed March 11, 19 67

This is to certify that the above plat was prepared from field notes of actual surveys made by me or under my supervision and that the same are true and correct to the best of my knowledge and belief.



Ernest V. Echohawk
Ernest V. Echohawk
Registered Land Surveyor
Arizona Registration No. 2311

DINEH-BI-KEYAH FIELD

Operator: Mountain States Petroleum Corporation

Bond Company: Indian lands, evidence of bond posted with BIA

Amount: \$325,000*

Bond No.: Letter of Credit Bond No. 315 **Date approved:** 5/27/94

*** Pursuant to commission motion of October 31, 1997, no bond required with State of Arizona upon evidence of bond posted with the BIA.**

Permits covered by this bond posted with the BIA:

<u>377</u>	<u>445</u>
<u>384</u>	<u>446</u>
<u>385</u>	<u>484</u>
<u>386</u> ✓	<u>506</u>
<u>388</u>	<u>618</u>
<u>389</u>	<u>691</u>
<u>390</u>	<u>692</u>
<u>396</u>	<u>693</u>
<u>416</u>	<u>695</u>
<u>417</u>	<u>696</u>
<u>419</u>	<u>719</u>
<u>421</u>	<u>720</u>
<u>422</u>	<u>721</u>
<u>431</u>	<u>722</u>
<u>443</u>	<u>723</u>



Jane Dee Hull
Governor

State of Arizona
Arizona Geological Survey

416 W. Congress, Suite 100
Tucson, Arizona 85701
(520) 770-3500



Larry D. Fellows
Director and State Geologist

December 1, 1997

Ms. Stacey Roberts
Kerr-McGee Corporation
P.O. Box 25861
Oklahoma City, OK 73125

386

Re: Kerr-McGee Corporation
\$25,000 Oil Drilling Blanket Bond #2971100-2620
Safeco Insurance Company of America

Dear Ms. Roberts:

Mountain States Petroleum has provided evidence of its bonding with the BIA for the Dineh-bi-Keyah Field in Arizona, and our records show that Kerr-McGee Corporation has no outstanding drilling or plugging obligations in Arizona.

As a result, this letter constitutes written permission by the Oil and Gas Conservation Commission to terminate liability under the referenced bond. A copy of the bond is enclosed for your information.

Please advise if we may be of further service.

Sincerely,

Steven L. Rauzi

Steven L. Rauzi
Oil & Gas Program Administrator

Enclosure

Operator KERR-MCGEE CORPORATION
Bond Company SAFECO INSURANCE COMPANY OF AMERICA Amount \$25,000
Bond No. 2971100-2620 Date Approved FEBRUARY 18, 1994

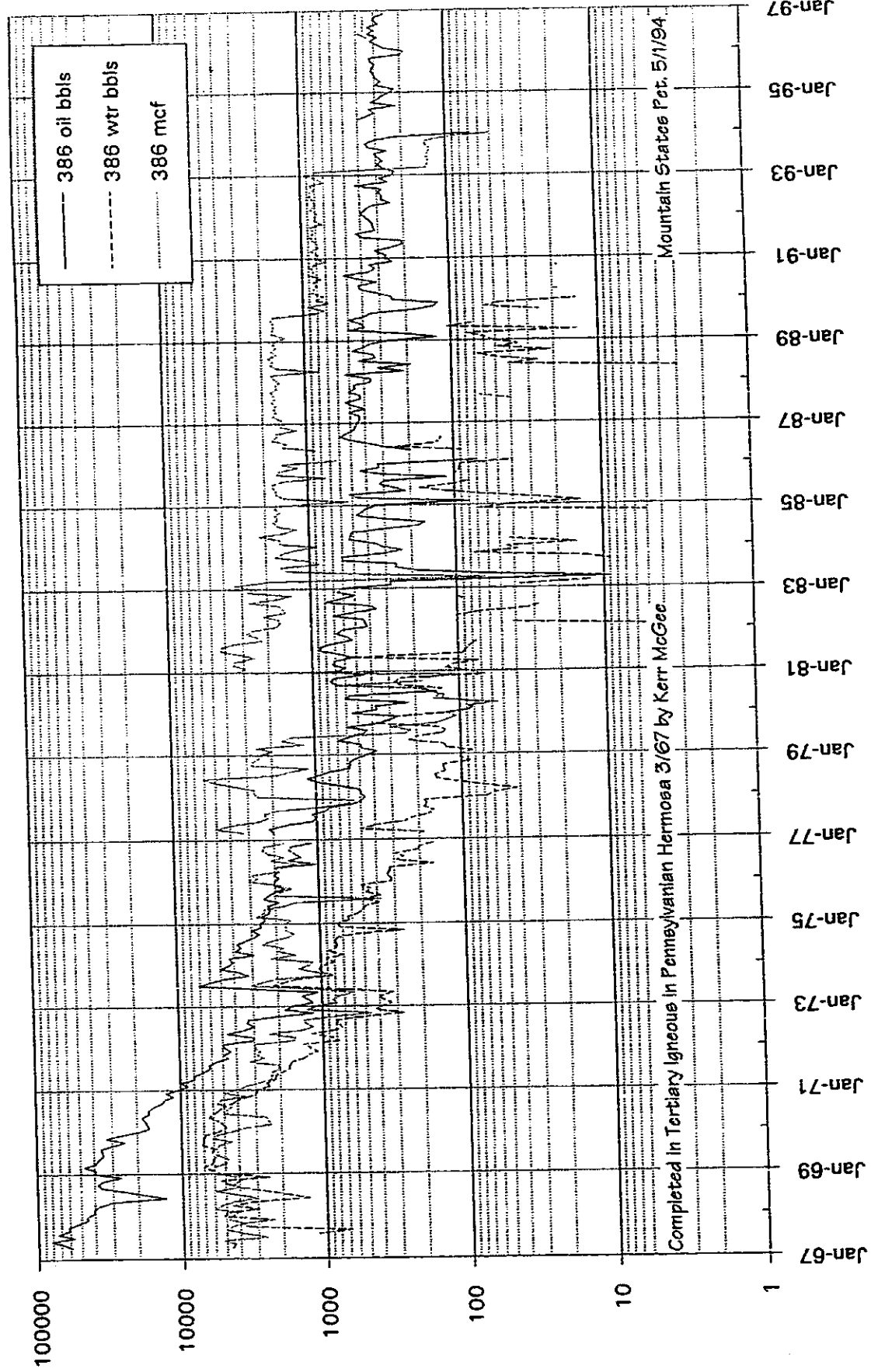
~~DATE~~

ACTIVE

Permits covered by this bond:

377	445
384	446
385	484
386	506
388	618
389	691
390	692
396	693
416	695
417	696
419	719
421	720
422	721
431	722
443	723

MONTHLY PRODUCTION AT 3X NAVAJO (386), ARIZONA: APR 1967 - DEC 1996
se se 32-36n-30e, Dineh-bi-Keyah Field, Apache County





Fife Symington
Governor

State of Arizona
Arizona Geological Survey

845 North Park Avenue, #100
Tucson, Arizona 85719
(602) 882-4795



Larry D. Fellows
Director and State Geologist

June 8, 1994

Ms. Judy Burkhart
Mountain States Petroleum Corporation
P. O. Box 1936
Roswell, New Mexico 88201

Dear Ms. Burkhart:

This will acknowledge receipt of your letter of June 6, which included a change of operator form for each of the 31 Kerr-McGee Corporation wells at the Dineh-bi-Keyah Field sold to Mountain States Petroleum Corporation. Our records indicate that the Navajo #B-1 was plugged and abandoned by Kerr-McGee Corporation in October 1993.

Please note that our records indicate a different API number than the one you have recorded on your forms for the following wells:

<u>Well</u>	<u>API #</u>
Navajo 01	02-001-20001
Navajo 03X	02-001-20011
Navajo 04	02-001-20009
Navajo 10	02-001-20042
Navajo 14	02-001-20040
Navajo 15	02-001-20041

Sincerely,

Steven L. Rauzi

Steven L. Rauzi
Oil & Gas Program Administrator

UNITED STATES DEPARTMENT OF THE INTERIOR
MINERALS MANAGEMENT SERVICE
ROYALTY MANAGEMENT PROGRAM

CHANGES TO REPORTER INFORMATION

OLD INFORMATION:

MMS OPERATOR CODE:

X0217

COMPANY NAME:

KERR MCGEE CORPORATION

NEW INFORMATION:

MMS OPERATOR CODE:

X0274

COMPANY NAME:

MOUNTAIN STATES PETROLEUM CORP

CONTACT NAME:

RUBY WICKERSHAM

STREET ADDRESS:

213 E FOURTH

CITY:

ROSWELL

STATE:

NM

ZIP CODE:

88201

PHONE:

505 623-7184

AREA CODE

COMPLETE IF APPLICABLE:

☐ I AM NO LONGER AN OPERATOR OF INDIAN OR FEDERAL PROPERTIES.
PLEASE REMOVE MY NAME FROM YOUR MAILING LIST.

COMPANY SOLD TO:

EFFECTIVE DATE:

LEASES / AGREEMENTS AFFECTED:

NAVAJO #3X

(386)

CONSERVATION COMMISSION

Dineh Bi Keyah Field - Apache County, Arizona

JUN 3 1994

Lease #: 14-20-0603-8823

API #: 020010531000S1-

02-001-20011

COMMENTS: This property was sold to Mountain States Petroleum Corp.

and they became operator effective May 1, 1994.

SIGNATURE:

Judy Burkhardt

DATE:

5/13/94

MAIL TO:

MINERALS MANAGEMENT SERVICE
ROYALTY MANAGEMENT PROGRAM
P.O. BOX 25165 MS 3122
DENVER, CO 80225

P. O. BOX 1936

505 623-7184

MOUNTAIN STATES PETROLEUM CORPORATION

213 EAST FOURTH STREET
ROSWELL, NEW MEXICO
88202

June 6, 1994

Arizona Geological Survey
845 North Park Avenue, #100
Tucson, Arizona, 85719

**AZ OIL & GAS
CONSERVATION COMMISSION**

JUN 8 1994

Attention: Steven L. Rauzi,
Oil & Gas Program Administrator

Re: Dineh-bi-Keyah Field
Apache County, Arizona

Dear Sir;

In followup of our May 24, 1994, letter to you relative to the change of operator from Kerr McGee to Mountain States Petroleum Corporation for the captioned field; please find enclosed a copy of the notices sent to the Minerals Management Service.

We hope this will supply the information you requested and apologize for any inconvenience we may have caused. If you have any questions or are in need of anything further please contact the undersigned. Thank you.

Sincerely,

Judy Burkhardt
Judy Burkhardt,
Secretary

Enclosures

P. O. BOX 1936

505 623-7184

MOUNTAIN STATES PETROLEUM CORPORATION

213 EAST FOURTH STREET
ROSWELL, NEW MEXICO
88202

May 24, 1994

Arizona Geological Survey
845 North Park Avenue, #100
Tucson, Arizona 85719

Attention: Steven L. Rauzi,
Oil & Gas Program Administrator

Re: Dineh-bi-Keyah Field
Apache County, Arizona

Dear Sir;

Please be advised that effective May 1, 1994, Mountain States Petroleum Corporation replaced Kerr-McGee as Operator of the captioned field and it's respective wells.

Listed on the attached sheet are the well names and API #'s of each well in this field, including shut-in, producing, and abandoned wells.

Please change your records to reflect that Mountain States Petroleum Corporation, Post Office Box 1936, Roswell, New Mexico, 88202-1936, (505) 623-7184, is now the operator of these properties and as such will be filing all required monthly production reports.

If you have any questions or are in need of anything further in this matter please contact the undersigned. Thank you.

Sincerely,

Judy Burkhart

Judy Burkhart,
Secretary

Attachment

RECEIVED
CONSERVATION COMMISSION

MAY 31 1994



KERR-McGEE CORPORATION

626 AMARILLO PETROLEUM BUILDING
P.O. BOX 250 • AMARILLO, TEXAS 79105

RECEIVED

SEP 8 1977

O & G CONS. COMM.

September 6, 1977

PHONE
806 376-7256

State of Arizona
Oil & Gas Conservation Commission
1645 W. Jefferson, Ste. 420
Phoenix, Arizona 85007

Re: Form 25, Sundry Notices &
Reports on Wells, for Kerr-
McGee Corporation's Navajo
Lease, Well No. 3X, Dineh-
Bi-Keyah Field, Apache County,
Arizona.

Gentlemen:

Please find enclosed the original and one copy of Form 25, for the above referenced well. With this notice, Kerr-McGee Corporation requests permission to install and operate a vacuum pump on the Navajo Lease Well No. 3X. This request is due to the fact that the fluid level is at the pump seat. Therefore, the efficiency of the pump is substantially reduced. Installation of a vacuum pump should raise the fluid level and provide increased pump efficiency.

Please send all correspondence and approvals to the undersigned, or call collect at 806/ 376-7256.

Sincerely,

KERR-McGEE CORPORATION

Larry D. McRae
Larry D. McRae
District Manager-Engineering
Southwest District - N. A.

LDM/bjs

Enclosures

386



November 5, 1973

PHONE
806 376-7256

Oil and Gas Conservation Commission
State of Arizona
4515 North Seventh Avenue
Phoenix, Arizona 85013

Attention: Mr. W. E. Allen
Director

Dear Mr. Allen:

In regards to your letter of September 18, 1973, requesting reserve information for the Dineh-bi-Keyah Field and Pinta Dome Field, please be advised that I have referred your letter to our Oklahoma City office and have determined that due to company policy, we are unable to furnish the information at this time.

Yours truly,

KERR-McGEE CORPORATION

Warren E. Richardson
Warren E. Richardson
District Manager
Southwestern District

WER/mm

386

RECEIVED

NOV 6 1973

O & G CON. COMM.

386



OFFICE OF
Oil and Gas Conservation Commission
STATE OF ARIZONA
4515 NORTH 7TH AVE.
PHOENIX, ARIZONA 85013
PHONE: (602) 271-5161

October 22, 1973

Ms. Kay Waller
Petro-Well Libraries Inc.
150 Security Life Building
1616 Glenarm Place
Denver, Colorado 80202

Re: October Current File Material

Dear Kay:

Enclosed is the current material for the month of October.

Data on File #588 - Humble Oil & Refining Company Well No. 1
State (14)

Plugging Record on File #392 - Kerr-McGee Corporation Well No. 5

Completion Report on File #386 - Kerr-McGee Corporation Navajo
No. 3-x

Completion Report on File #379 - Kerr-McGee Corporation Navajo
No. 2

Completion Report on File #431 - Kerr-McGee Navajo Tract #88-2

Data on File #616 - Zoller & Danneberg Inc. Navajo E-2X

By certified mail you will receive logs on File #588 - Humble Oil
and Refining Company Well No. 1 State (14).

Very truly yours,

W. E. Allen, Director
Enforcement Section

Rhema Brandt
Secretary to W. E. Allen

/rlb

Encs.



KERR-McGEE CORPORATION

626 AMARILLO PETROLEUM BUILDING
P. O. BOX 250 • AMARILLO, TEXAS 79105

PHONE
806 376-7256

October 8, 1973

State of Arizona
Oil and Gas Conservation Commission
4515 North Seventh Avenue
Phoenix, Arizona 85013

Attention: Mr. W. E. Allen

Dear Mr. Allen:

Enclosed is one copy each of a completed Form Number 4, Recompletion Report, for the Kerr-McGee Corporation Navajo Well Numbers 2 and 3-X, and Navajo Tract 88, Well Number 2 in the Dineh-bi-Keyah Field, Apache County, Arizona. All of these wells were reperforated and fractured.

The Navajo Number 2 was originally perforated from 3,060' to 3,114' with two JHPF in the Hermosa. It was reperforated from 3,060' to 3,130' with two JHPF during the workover and fractured with 80,000 gallons of lease crude and 80,000# of 10-20 sand.

The Navajo Number 3-X was originally perforated from 3,437' to 3,457' with five JHPF in the Hermosa. It was reperforated from 3,437' to 3,477' with two JHPF during the workover and fractured with 77,674 gallons of lease crude and 80,000# of 10-20 sand.

The Navajo Tract 88, Number 2 was originally perforated 4,045' to 4,105' with one hole per three feet in the Hermosa. It was reperforated from 4,045' to 4,105' with two JHPF during the workover and fractured with 80,000 gallons of lease crude and 80,000# of 10-20 sand.

Sincerely yours,

KERR-McGEE CORPORATION

C. J. Breeden

C. J. Breeden
District Production Superintendent

CJB:lp

386

RECEIVED

OCT 10 1973

O & G CONS. COMM.



OFFICE OF

Oil and Gas Conservation Commission

STATE OF ARIZONA

4515 NORTH 7TH AVE.
PHOENIX, ARIZONA 85013

PHONE: (602) 271-5161

September 18, 1973

Mr. Warren E. Richardson
Kerr-McGee Corporation
P. O. Box 250
Amarillo, Texas 79105

Dear Mr. Richardson:

Will you please supply this Commission with any information that you might have regarding the recoverable reserves in the Dineh-Bi-Keyah Field and also in the Pinta Dome Field?

This information will be considered confidential if you so desire.

Thank you for your cooperation.

Very truly yours,

W. E. Allen, Director
Enforcement Section

WEA/rlb



KERR-McGEE CORPORATION

626 AMARILLO PETROLEUM BUILDING
P. O. BOX 250 • AMARILLO, TEXAS 79105

June 19, 1973

PHONE
806 376-7256

Arizona Oil and Gas Conservation Commission
4515 North Seventh Avenue
Phoenix, Arizona 85013

Gentlemen:

Enclosed are two (2) completed copies of your Form Number 25
for the Kerr-McGee Corporation Well Number 3X in the Dineh-
bi-Keyah Field, Apache County, Arizona.

This is the subsequent report of perforating and fractur-
ing this well. The work was delayed due to the weather
and subsequent poor road conditions.

Sincerely yours,

KERR-McGEE CORPORATION

C. J. Breeden

C. J. Breeden
District Production Superintendent
Southwestern District
Production Department

CJB/mm

Enclosures

RECEIVED

JUN 21 1973

O & G CONS. COMM.

384



KERR-McGEE CORPORATION

626 AMARILLO PETROLEUM BUILDING
P. O. BOX 250 • AMARILLO, TEXAS 79105

February 2, 1973

PHONE
806 376-7256

Arizona Oil and Gas Conservation Commission
4515 North 7th Avenue
Phoenix, Arizona 85013

Gentlemen:

Enclosed are two (2) completed copies of your Form No. 25 for the Kerr-McGee Corporation Well No. 3X in the Dineh-bi-Keyah Field, Apache County, Arizona.

Some of the perforations in this well appear to be closed by scale deposits. Present perforations are from 3,427' - 3,457' with 5 HPF. Kerr-McGee proposes to reperforate the interval from 3,437' - 3,457' with 2 HPF and perforate an additional 20' from 3,457' - 3,477' with 2 HPF. The well will be fractured with 80,000 gallons of lease oil and 80,000# of 10-20 sand with a scale preventive included in the treatment.

Work will commence after approval and when weather permits.

Sincerely yours,
KERR-McGEE CORPORATION

C. J. Breeden

C. J. Breeden
District Production Superintendent
Southwestern District
Production Department

CJB/mm

Enclosures

386

RECEIVED

FEB 05 1973

O & G CONS. COMM.



OFFICE OF
Oil and Gas Conservation Commission
STATE OF ARIZONA
ROOM 202
1624 WEST ADAMS
Phoenix, Arizona 85007
PHONE: 271-5161

June 12, 1969

Kerr-McGee Corporation
Kerr-McGee Building
Oklahoma City, Oklahoma 73102

Re: Case No. 36

Attention: Mr. John Fisher

Gentlemen:

Pursuant to Commission Order 21A dated May 21, 1969, a meeting was held in the Commission offices at 1624 West Adams Street, Phoenix, Arizona, at 1:00 p.m. on June 11, 1969.

Present at this meeting and representing Kerr-McGee Corporation were Mr. John I. Fisher and Bill P. Stauss. Present and representing Humble Oil Company were Kenneth E. Larsen and J. E. Lytle. Present and representing the Oil and Gas Conservation Commission were John Bannister, James R. Scurlock and James Lambert. Also present and representing the Commission in his capacity as engineer was Ewell Walsh of Farmington, New Mexico.

The purpose of this meeting was to establish a testing program for Kerr-McGee Corporation's proposed well, the Kerr-McGee No. 11 Navajo, to be located in the NW/4 SE/4 of Section 32, Township 36 North, Range 30 East, Apache County, Arizona, and being a part of the Dineh-bi-Keyah Field.

As a result of this meeting, the following testing program has been established as satisfactory to this Commission. The program outlined below will be strictly adhered to and no deviation therefrom will be permitted.

TESTING PROGRAM

1. After the Kerr-McGee No. 11 Navajo Well has reached total depth, completed, and after load oil has been recovered (the initial potential test will be delayed until the first day of full production from this well),

Kerr-McGee Corp.
6-12-69
Page 2

this well will be shut in until its bottom hole pressure has stabilized to within no more than a five pound pressure increase or less over a 24-hour period.

2. After the Kerr-McGee No. 11 Well has stabilized as set forth in Section 1 above, Kerr-McGee Nos. 1, 2, 3X and 4 Navajo Wells will be shut in for a continuous twelve hour period.
3. After the initial twelve hour shut in period as outlined in Section 2 above, Kerr-McGee No. 4 Well shall be put on production.
4. Twelve hours after Kerr-McGee No. 4 Navajo Well has been put on production, the Kerr-McGee No. 3X Navajo Well will be put on production.
5. Twelve hours after Kerr-McGee No. 3X Navajo Well has been put on production, the Kerr-McGee No. 2 Navajo Well will be put on production.
6. Twelve hours after Kerr-McGee No. 2 Navajo Well has been put on production, the Kerr-McGee No. 1 Navajo Well will be put on production.
7. Continuous bottom hole pressure readings shall be recorded in the Kerr-McGee No. 11 Navajo Well for a maximum period of 192 hours from the time that Kerr-McGee Nos. 1, 2, 3X and 4 Navajo Wells are shut in, as outlined in Section 2 above, or until there is evidence of interference in the Kerr-McGee No. 11 Navajo Well, whichever is the lesser time.

Should there be evidence of interference in this well prior to the 192 hours specified maximum time, Kerr-McGee Corporation will immediately notify the Commission at its Phoenix address. Should the Executive Secretary of the Commission be satisfied that there is evidence of interference, he may authorize a cessation of these tests. Should the Executive Secretary not be satisfied as to evidence submitted, test will continue for the full maximum 192 hours, as herein specified.

8. Upon completion of the tests as specified in Section 7 above, Kerr-McGee Corporation may commence the full production of the Kerr-McGee No. 11 Navajo Well.

Kerr-McGee Corp.
6-12-69
Page 3

Commission Order No. 24 dated August 16, 1967 establishes bottom hole pressure testing for certain key wells within the Dinah-bi-Keyah Field. Inasmuch as Kerr-McGee Nos. 1 and 2 Navajo Wells are designated in said order as key wells, the shut in time as above specified in Section 2 of the testing procedure may be used by Kerr-McGee Corporation for its stabilization period for the purpose of compliance with said Order No. 24.

The bottom hole pressure test as called for in said Order No. 24 as to the Kerr-McGee No. 9 Navajo Well and as to the Humble No. 1-139 Navajo Well, shall be conducted as soon as possible after the completion of the above set forth testing schedule.

Should you have any questions, please advise immediately.

Yours truly,

John Bannister
John Bannister
Executive Secretary

/vb

cc - Humble Oil Company
Att'n. J. K. Lytle

Ewell Walsh

Commissioners

U.S.G.S. - Farmington
Att'n. Phil McGrath

The Navajo Tribe
Att'n. P. K. Hurlbut

Operator KERR MC GEE ~~OIL~~ ^{Corporation} INDUSTRIES INC.

Bond Company Insurance Co. of N. America Amount 25,000

Bond No. M 41 95 25 (KM528) Date Approved 10-28-65

Permits covered by this bond:

10	386	417
36	389	418
37	390	419
38	391	420
39	392	422
57	396	426
63	397	427
64	398	441
142	399	445
238	402	446
303	403	
90	404	
91	405	
349	406	
303	407	
377	408	
378	409	
379	410	
380	411	
381	413	
384	414	
385	416	

→ see this file

CANCELLED

DATE 10-24-68

Superseded by
American Casualty Co. Bond
#25000
#15471020182
DATE 10-19-73

CANCELLED



KERR-MCGEE CORPORATION

KERR-MCGEE BUILDING • OKLAHOMA CITY, OKLAHOMA 73102

215 Petroleum Center Building
Farmington, New Mexico 87401

August 11, 1967

State of Arizona Oil & Gas Conservation Commission
Room 202 - 1624 West Adams
Phoenix, Arizona 85007

Attention: Mr. John Bannister
Executive Secretary

Re: Confidential Well Information
Dineh-bi-Keyah Field
Apache County, Arizona

Dear John:

Please be advised that Kerr-McGee has removed from confidential well status the following wells:

Navajo No. 1	-	SESW, Section 32, T36N, R30E
Navajo No. 2	-	SESW, Section 32, T36N, R30E
Navajo No. 3X	-	SESE, Section 32, T36N, R30E
Navajo No. 4	-	SENE, Section 32, T36N, R30E
Navajo No. 6	-	SENE, Section 31, T36N, R30E
Navajo No. 7	-	SESW, Section 29, T36N, R30E
Navajo No. 8	-	SESE, Section 29, T36N, R30E
Navajo No. 9	-	SESE, Section 30, T36N, R30E
Navajo No. 14	-	SESW, Section 31, T36N, R30E
Navajo No. 15	-	SESW, Section 30, T36N, R30E
Navajo No. 16	-	SESW, Section 30, T36N, R30E
Navajo No. C-2	-	SESW, Section 33, T36N, R30E

Kerr-McGee desires to hold in the confidential status the information on the following wells:

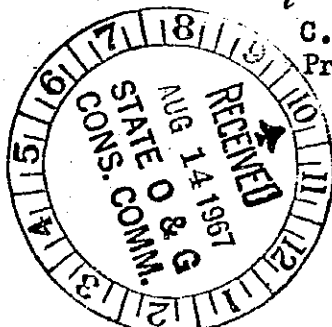
Navajo No. 5	-	SESE, Section 31, T36N, R30E
Navajo No. 13	-	SESW, Section 31, T36N, R30E
Navajo No. B-1	-	SESW, Section 5, T35N, R30E
Navajo No. B-2	-	SENE, Section 5, T35N, R30E
Navajo No. E-1	-	SESE, Section 20, T36N, R30E

Very truly yours,

C. D. Williams
C. D. Williams
Production Superintendent

CDW:la

CC: USGS - Farmington
Navajo Tribe - Farmington



August 7, 1967

Mrs. Anna Smith, Manager
Four Corners Sample Cut Association
P. O. Box 869
Farmington, New Mexico

Re: Kerr-McGee Well Number
Dineh-Bi-Seg in Field
Apache County, Arizona

Dear Mrs. Smith:

Kerr-McGee Corporation is releasing well cuttings and core chips
from the following Apache County, Arizona, wells to the Four Corners
Sample Cut:

Kerr-McGee #2 Navajo, 2020' FNL & 1980' FNL, Sec.32-36N-30E,
Elev. 7604 GL, 7614 KB. Spudded 2-14-67, Comp. 3-12-67,
T.D. 3275'.

Kerr-McGee #3 Navajo, 950' FSL & 350' FEL, Sec.32-36N-30E,
Elev. 7992 GL, 8002 KB. Spudded 3-11-67, Comp. 4-7-67,
T.D. 3600'.

Kerr-McGee #4 Navajo, 1720' FNL & 870' FEL, Sec.32-36N-30E,
Elev. 7361 GL, 7374 KB. Spudded 6-28-67, Comp. 7-18-67,
T.D. 2960'.

Kerr-McGee #7 Navajo, 590' FSL & 1870' FNL, Sec.29-36N-30E,
Elev. 7498 GL, 7508 KB. Spudded 3-29-67, Comp. 4-22-67,
T.D. 3270'.

Kerr-McGee #9 Navajo, 640' FSL & 550' FEL, Sec.30-36N-30E,
Elev. 7881 GL, 7894 KB. Spudded 4-13-67, Comp. 5-5-67,
T.D. 3720'.

Kerr-McGee #1 Navajo "B", 1980' FNL & 2160' FNL, Sec.5-35N-30E,
Elev. 8491 GL, 8503 KB. Spudded 3-7-67, Comp. 6-22-67,
T.D. 4130'.

Mrs. Anna Smith
August 7, 1967
Page 2

Samples from the foregoing wells will be delivered to your office
this week.

Yours very truly,

KERR-MCGEE CORPORATION

R. W. King

R. W. King
Division Manager

RWK:sg

cc: J. W. McKenny
J. I. Fisher

John Bannister
Arizona O&G Conservation Commission
Room 202 - 1624 West Adams
Phoenix, Arizona 85007

Henry F. Fohlmann
Navajo Tribe Minerals Dept.
412 Petroleum Plaza Bldg.
Farmington, New Mexico

July 19, 1967

Oil and Gas Conservation Commission
Room 202 - 1624 W. Adams
Phoenix, Arizona 85007

Attn: Mr. John Bannister

Re: Well Logs For:
Navajo Well 3X
Apache County, Arizona
S32-T36N-R30E

Gentlemen:

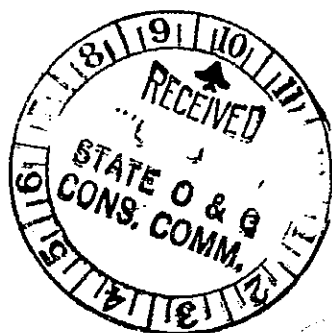
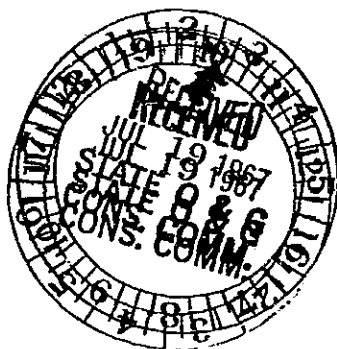
With reference to Kerr-McGee's letter of July 12, 1967 wherein the set of electric logs was furnish to the commission with the request that they be kept confidential for the remainder of the six-month period, this is to advise that effective immediately Kerr-McGee authorizes the release and use of the logs on Well #3X.

In order to further clarify Kerr-McGee's position, release is also authorized for all other data with reference to the wells for which the logs have also been released.

Very truly yours,

KERR-MCGEE CORPORATION

C.F. Miller
C.F. Miller, General Manager
Oil & Gas Prodn. Oprs.





KERR-McGEE CORPORATION

KERR-McGEE BUILDING • OKLAHOMA CITY, OKLAHOMA 73102
215 Petroleum Center Bldg.
Farmington, New Mexico
July 12, 1967

Arizona State
Oil & Gas Conservation Comm.
Room 202 - 1624 W. Adams
Phoenix, Arizona 85007

Attn: Mr. John Bannister

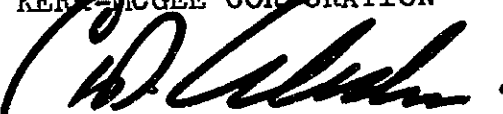
RE: Well Logs For:
Navajo Well 3X
Dineh-bi-Keyah Field
Apache County, Arizona
Sec. 32, T36N, R30E

Gentlemen:

Enclosed please find 1 set of the logs run on the captioned well. These are the Induction-Electric log and the Borehole Compensated Sonic-Gamma Ray Log.

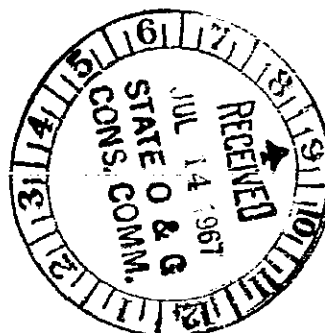
Please keep these logs confidential for the remainder of the six month period provided by Oil and Gas Conservation Commission rules and regulations.

Very truly yours,
KERR-McGEE CORPORATION


C. D. Williams
Prod. Supt.

CDW/hs

Enclosures



386

*Many
corrections*



KERR-MCGEE CORPORATION

KERR-MCGEE BUILDING • OKLAHOMA CITY, OKLAHOMA 73102

215 Petroleum Center Building

Farmington, New Mexico

June 5, 1967

State Of Arizona
Oil & Gas Conservation Comm.
Room 202 - 1524 W. Adams St.
Phoenix, Arizona

Attn: Mr. John Bannister, Executive Secr.

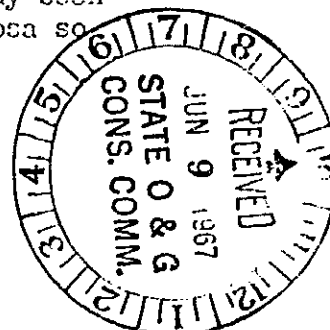
RE: 160 Acre Units
Lower Hermosa Formation
Dinch-bi-Keyah Field
Apache County, Arizona

Gentlemen:

As provided by Commission Order No. 21, oil wells in the lower Hermosa formation shall be on spacing units comprising a full governmental quarter section. Certain wells have already been permitted by Kerr-McGee Corporation with a dedicated area of only 80 acres. The quarter section allotted to each of the wells presently permitted is as follows:

WELL	PERMIT NO.	QUARTER SECTION
Navajo #1	377	SW/4 Sec. 32 - 36N - 30E
Navajo #2	379	NE/4 Sec. 32 - 36N - 30E
Navajo #3X	386	SE/4 Sec. 32 - 36N - 30E
Navajo #4	384	NE/4 Sec. 32 - 36N - 30E
Navajo #5	392	SE/4 Sec. 31 - 36N - 30E
Navajo #6	390	NE/4 Sec. 31 - 36N - 30E
Navajo #7	389	SW/4 Sec. 29 - 36N - 30E
Navajo #8	391	SE/4 Sec. 29 - 36N - 30E
Navajo #9	396	SE/4 Sec. 30 - 36N - 30E
Navajo #12	399	NE/4 Sec. 29 - 36N - 30E
Navajo "E" #1	381	NW/4 Sec. 5 - 35N - 30E
Navajo "C" #1	397	SW/4 Sec. 33 - 36N - 30E
Navajo "B" #1	398	SE/4 Sec. 20 - 36N - 30E

Two wells, Navajo "E" #1 and Navajo "B" #2 have already been drilled and did not obtain oil production in the lower Hermosa so



386



Attn: Mr. J. Bannister

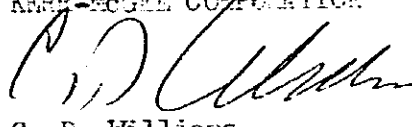
Page 2

June 5, 1967

these wells were not included. Also, Navajo #3 was not included since it was replaced by Navajo #3X.

If additional information is needed, please advise.

Sincerely yours,
KERR-MCGEE CORPORATION


C. D. Williams
Prod. Supt.

CDW/hs

384

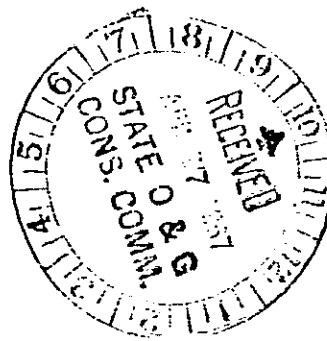
Copy on all
files



KERR-McGEE

POST OFFICE BOX 1000 • SUNDAY, TEXAS 79060

April 25, 1967



State of Arizona

Oil and Gas Conservation Commission

Room 202, 1624 West Adams
Phoenix, Arizona 85007

Attention Mr. John Bannister

Gentlemen :

It is our request that all information on producing, Drilling, and Permitted wells operated by Kerr McGee Corporation in Dinah bi Meyeh Field in Apache County Arizona be kept confidential.

The producing wells are Kerr-McGee Navajo wells No.1, 2, 3X and 7. Well no. 7 has been put on pump but has not been potentialled because mechanical and transportation difficulties. Wells started but not completed are Kerr-McGee Navajo No.9, Navajo No. B-1 and No. B-2.

Wells that have been permitted but drilling operations have not actually started are our Navajo wells No.4, 5, 6, 8 and 12, and Navajo B-1 and C-1. Most of the road and location work has been completed on these locations.

Yours very truly,
Kerr-McGee Corporation

W. C. Barton

Division Supt. Oil & Gas Production
Sunny, Texas.

386



KERR-McGEE CORPORATION

POST OFFICE BOX "K" • SUNRAY, TEXAS 79086

April 11, 1967

State of Arizona
Oil and Gas Conservation Commission
Room 202
1624 West Adams
Phoenix, Arizona 85007

Attention: Mr. John Bannister

Gentlemen:

Enclosed is one copy of your Form No. 4, Well Completion and Well Log, your Form No. 6, Potential Test and Request for Allowable-Oil Wells, plat showing the lease, and U.S.G.S. Form 9-330, Well Completion and Log, for the Kerr-McGee Corporation Navajo No. 3X, located 330' FEL and 980' FSL of Section 32, T36N, R30E, Apache County, Arizona. Well logs will be mailed at a future date.

Please keep this information confidential.

Yours very truly,

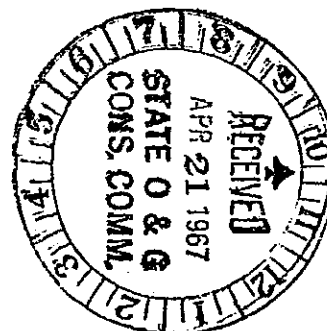
Kerr-McGee Corporation

E. C. Reish, Jr.

E.C. Reish, Jr.

Enclosures:
ECR/wm

386



April 4, 1967

Mr. Otto Barton
Kerr-McGee Corporation
P.O. Box K
Sunray, Texas 79086

Re: Kerr-McGee #3A Navajo
SE SE 32-36N-30E, Apache County, Arizona
Permit 386

Dear Mr. Barton:

The Commission hereby re-designates the captioned well to Kerr-McGee #3X Navajo. The change is to avoid confusion to other reporting agencies. In General usage the designation "X" is used to denote that the rig has been skidded for some reason and that the well is a replacement of one lost.

We are changing our records accordingly.

Should you have any questions, would you please advise.

Very truly yours,

John Bannister
Executive Secretary
mr

386



KERR-McGEE CORPORATION

POST OFFICE BOX "K" • SUNRAY, TEXAS 79086

March 28, 1967

State of Arizona
Oil and Gas Conservation Commission
Room 202
1624 West Adams
Phoenix, Arizona 85007

Attention: Mr John Bannister

Gentlemen:

Enclosed for your information are two copies of U.S.G.S. Form 9-331, Sundry Notices and Reports on Wells, covering setting and testing the production casing for the Kerr-McGee Corporation Navajo No 3A, located 330' FEL and 980' FSL of Section 32, T36N, R30E, Apache County, Arizona.

Yours very truly

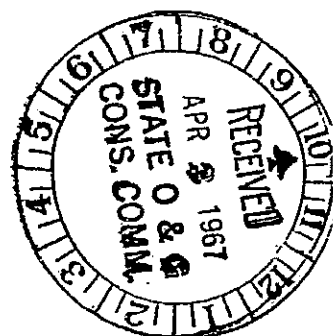
KERR-McGEE CORPORATION

E. C. Reish, Jr.

E. C. Reish, Jr.

ECR/s

Enclosure:



386

ERNEST V. ECHOHAWK

204 SUMMITT DRIVE
FARMINGTON NEW MEXICO
87401

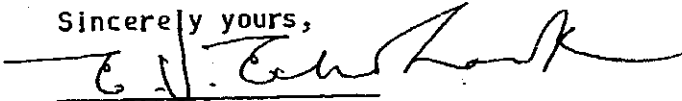
March 13, 1967

State of Arizona
Oil & Gas Conservation Commission
1624 W. Adams
Phoenix, Arizona

Dear Sir:

I wish to file a copy of this plat with your office on behalf of
Kerr-McGee Oil Industries, Inc.

Sincerely yours,


Ernest V. Echohawk

EVE:ed

C.C.
O. C. Barton
Kerr-McGee Oil Industries, Inc.
Sunray, Texas